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THE NEW
ILLUSTRATED
GEOGRAPHY ^{AND} ATLAS.

BY

W. C. CAMPBELL,

AUTHOR OF "MODERN SCHOOL GEOGRAPHY AND ATLAS."

WITH

THIRTY-SIX FULL-PAGE COLORED MAPS

PREPARED BY

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PREFACE.

THE best method of teaching geography is a question which has engaged the attention of leading educationists for some time past, the object in view being to secure the best results in the simplest and most practical manner. To accomplish this—the old method of giving long lists of names and figures to be committed to memory has been discarded ; and that of creating familiarity with the maps, physical and political, induced by the necessity of careful and accurate study, has been adopted. Maps, therefore, now become the primary, and the letterpress the supplementary study, to be amplified by the intelligent teacher according to the time at his disposal.

In this Geography the aim has been to supply in the Maps and Illustrations themselves the greater part of the geographical knowledge (physical and commercial) that any pupil might be required to learn. In order, however, to facilitate the labor of the teacher as well as the study of the pupil, a certain amount of letterpress is necessary, wherein are given—*Statistics* in tabular form, to be used at the discretion of the teacher ; certain elements of *Political Knowledge* ; and *Minor Details*, which are readily acquired when the main features have been mastered. As this is intended to be a *Canadian* Text-Book, special attention is given to Canada and its various provinces, while Great Britain and the United States, with both of which Canada has such intimate commercial relations, are more fully treated than other countries.

Beauty of Typography and its attractive mechanical arrangement ; *Usefulness of Illustration*, whereby each picture may be made an object lesson in itself ; and *Comprehensive Teaching of the Maps* ; combined with the artistic merits and accuracy of the whole, are the main features, upon which is based the hope that this book may become a useful and practical manual for the Dominion of Canada.

The enumeration of names, boundaries, and of similar tedious details has been avoided, and to meet this omission a series of questions on each map has been prepared which can

be answered only by reference to the maps ; thus necessitating a study of each in detail. (*Questions on the text are altogether omitted, and are left to the teacher to frame according to the ability of the class.*)

The plan upon which this book has been prepared may, therefore, be summarized thus :—

1. To furnish clear and distinct *Physical Maps*, (supplemented by *Relief Views*.) upon which are shown the heights and depressions of land ; the various products, vegetable, animal, and mineral ; the isothermal lines ; the ocean currents and fisheries ; and all the peculiarities in the physical features of each part of the globe.

2. In the *Political* and *Commercial Maps* to show clearly the political divisions of the world and of the various countries, and to give special prominence to their means of communication and channels of commerce, internal and external.

By a judicious combination of study on the Physical and Commercial Maps the causes of the growth and position of cities as sea-ports, manufacturing-, mining-, and distributing-centres ; and the dependence of political and commercial position and progress upon the physical features of the countries are made clear to the pupil ; and valuable practical knowledge will be gained far more rapidly and with infinitely better understanding than can be attained by rote-learning from the text. Particular attention has been given to the various routes of travel by sea, rail, or caravan, and to the submarine telegraph system, by which commercial communication is carried on all over the world.

Valuable lessons may also be framed from the relation of the isothermal lines to the climate and products of countries, as well as to the ocean currents and land winds.

The illustrations will, it is hoped, materially assist the pupil in forming an idea of the various industries and modes of travel in foreign countries. *Physical, Industrial and Commercial Geography* thus form a distinctive feature of this book as compared with those hitherto in use.

PREFACE.

Experience thus gained will enable pupils to read books of history and travel, as well as the newspapers of the day, with an intelligent understanding of the places mentioned, of the peoples and their condition, of the physical features of the countries, and of the general condition of civilization in any part of the world.

3. To provide in the text, in as concise a form as possible, a summary of the most important features of a nation's position in civilization, its extent, resources, industries, commerce, and government.

By means of the numerous illustrations an accurate idea is given of the various peculiarities and characteristics of the different parts of the earth ; each picture is capable of being made a study in itself, and is not intended merely as an ornament to the book.

Great attention has been given to typographical execution and arrangement,—I. By variety in the size of the type used : those paragraphs which are of most importance being in the largest type ; those next in importance being in the second size of type ; and those which may be omitted in the junior classes in the smallest type. II. By printing the salient features of each paragraph in **Clarendon type**, whereby the teacher is assisted in framing questions, and the attention of the pupil is arrested in the preparation

of the lesson. III. By the large, bold, and clear character of the type—a very important desideratum to the pupil who has to study at night.

The maps have also been prepared to avoid the necessity of the pupil straining the eyes to read small names. Although a smaller sized book might be considered preferable for handling, yet this could be secured only at the cost of those features which experience has shown to be much more important.

A short sketch of Ancient Geography is appended, together with a map. These cover all that is required for the Ontario High School Examinations.

To make this Geography as complete as possible, a COUNTY MAP, showing every township and post-office, is supplied with each copy of the book. No exercises are supplied for these County Maps, as it is deemed best to leave these to the discretion of the teacher. An INDEX, giving the pronunciation of proper names, is also appended.

As map-drawing is now such an important feature in acquiring an accurate knowledge of geography, Outline Maps in two series, for drawing and coloring, are published, corresponding in size to those in this book : the first series gives the outlines of countries, leaving all the names to be filled in by the pupil ; the second series gives the geographical lines only.

LIST OF MAPS.

POLITICAL AND COMMERCIAL.

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|--|---|
| 1-2. THE WORLD (<i>Mercator's Projection</i>).
3. NORTH AMERICA.
4-5. DOMINION OF CANADA.
6-7. ONTARIO.
8-9. QUEBEC.
10. NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND.
11-12. UNITED STATES.
13. MEXICO, CENTRAL AMERICA AND WEST INDIA ISLANDS.
14. SOUTH AMERICA.
15. EUROPE. | 16. ENGLAND AND WALES.
17. SCOTLAND.
18. IRELAND.
19. WESTERN EUROPE (France, Spain, Portugal, etc.).
20. CENTRAL AND SOUTHERN EUROPE (Austria, Italy, Turkey, Greece, etc.).
21. GERMAN EMPIRE, HOLLAND, AND BELGIUM.
22. ASIA.
23. AFRICA.
24. THE WORLD (<i>as known to the Ancients</i>). |
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PHYSICAL.

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| 1. WESTERN HEMISPHERE.
2. EASTERN HEMISPHERE.
3. NORTH AMERICA.
4-5. DOMINION OF CANADA.
6-7. ONTARIO. | 8. SOUTH AMERICA.
9. EUROPE.
10. ASIA.
11. AFRICA.
12. AUSTRALASIA. |
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Map drawing is a necessary accompaniment to the study of geography, and is as important to the latter as composition is to the study of language. There is no branch of the school course which is more readily acquired, or which gives more pleasure to the pupil.

The chief object of map drawing is to familiarize the pupil with correct ideas of position, distance and direction; the general shape and surface of a country in whole or in part; and with the relative positions of the principal cities, towns and villages, as well as the mountains, rivers, and coast-lines of the various countries.

As soon as the pupil has mastered the principles of map drawing, the study of geography ought to be identified with the map, upon which the lesson is given. The outline should first be carefully prepared (or copied from the book), and then the names of the different features and places written as the lesson progresses.

In the first lesson on each map it is best to let the pupil use the ruler for measuring. In the second and more important review, the map should be drawn from memory, and the ruler used only for drawing the straight lines.

To acquire facility in drawing a map, the following suggestions will be found useful; but it is to be remembered that absolute accuracy, especially at first, is not essential, so long as proper attention is given to direction, proportion, and position.

FIRST STEP.

Let the teacher, with the assistance of the pupils, measure the greatest length and breath of the school grounds. Explain that in order to make a representation of this upon the black-board, it is necessary to reduce the size proportionately. Supposing the ground to be 300 feet long and 200 feet wide, it is not difficult to show that 300 feet may be represented by 300 inches, or by substituting one foot for each 100, by three feet. The outline can then be placed upon the black-board by first drawing two, faint, dotted lines at right angles to each other, their measuring off three feet on one, and two feet on the other. If the ground is rectangular, the outline can now be formed. To assist the eye in determining position, other dotted lines may be drawn at each foot of length, thus subdividing the drawing into six spaces, each representing 100 feet square. The size and situations of the buildings, and the position of trees and out-houses should next be ascertained and marked within the diagram.

Mark the cardinal points, and explain that the top of the map as a rule is north.

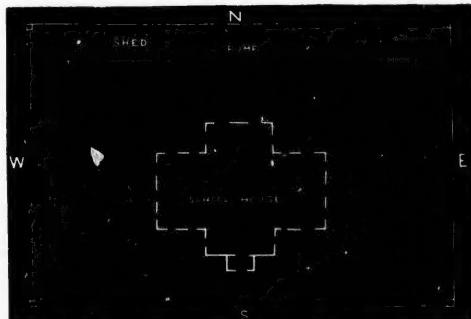


DIAGRAM 1.

Pupils should now copy the diagram on their slates, making the squares one inch instead of a foot, and using the ruler. All that has been represented

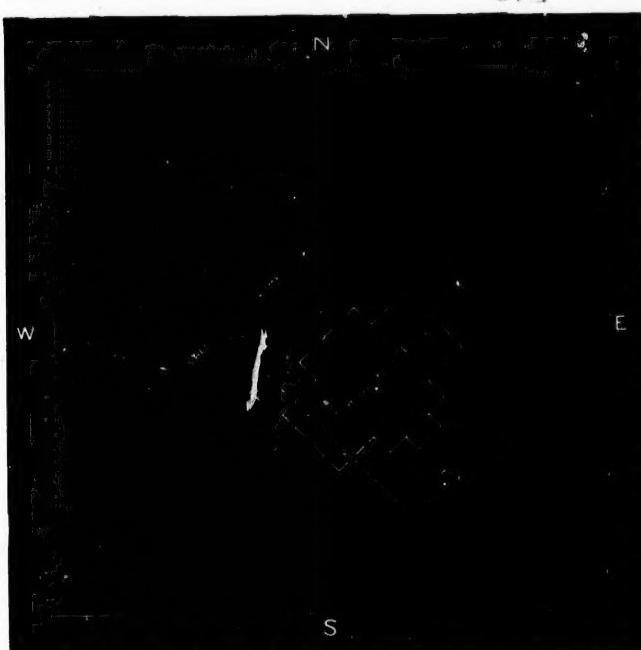


DIAGRAM 2.

on the blackboard should be placed in the same respective squares on the slate.

As it frequently happens that sides of the school-ground do not correspond with the cardinal points, draw the plan first as though they did, as in diagram 1, and secondly, within a rectangle the sides of which are north, south, east and west, as in diagram 2.

Much care and frequent repetition are necessary at this stage in order to secure habits of careful observation, accuracy, and neatness, which are the necessary principles of map drawing.

Every school should be furnished with a small hand-compass, by which to determine the cardinal points.

SECOND STEP.

In country districts the school section should next be drawn, and in towns a plan of the whole or part may be made, showing the principal streets and the relative positions of the most important buildings. Pupils should be requested to ascertain distances and other particulars, so as to increase their interest in the work. Two dotted lines drawn at right angles representing the correct points of the compass should first be drawn, and the point of intersection should be the starting point or position of the school-house. One yard, or even one foot, may now be made to represent a mile, while on the slate two or three inches will answer the same purpose. This exercise may be followed by a map of the Township, reducing the relative proportions or scale. Roads should be shown by means of two parallel lines, and care must be taken not to let these lines cross each other where the roads intersect.

By this time the pupils will understand the principle of drawing to a scale, although that term has not hitherto been used.



DIAGRAM 3.

MAP DRAWING—*Continued.*

THIRD STEP.

The drawing of county maps forms the next stage, because most of the counties although somewhat irregular in form, are generally bounded by straight lines.

Having first ascertained the greatest extent, east and west, and north and south,* proceed as in the first lesson by drawing two dotted lines perpendicular to each other, then with the ruler measure off on each, distances equal to ten miles. These may be represented by six or twelve inches on the blackboard, or by one or two inches on the slate or paper. Form a rectangle, and divide into spaces ten miles square. These spaces may be again subdivided, if necessary, by drawing parallel lines in each direction through the centre of the squares.

In the accompanying diagram the map, which is five by five inches, will show what is required, and if drawn on a larger scale may be subdivided into one hundred instead of twenty-five spaces.

In drawing a map, always begin at the upper left hand side, and work as much as possible from left to right. Note carefully the direction of the lines forming the boundaries, and the position they occupy in each square.

Next draw the rivers, also from left to right, by means of irregularly waved lines. Mark and name all the cities, towns, and villages, then arrange the letters forming the names of the county and of the various townships in such a way as not to interfere with those names already written.

This exercise should be repeated until the pupils are thoroughly familiar with the map, and are able to draw it rapidly, with reasonable correctness, and without the assistance of the squares. Those counties which are most easily drawn, as Halton, Grenville, Dundas, Stormont, Glengarry, and Russell, should be taken first. Groups of two or more counties may now be taken until the pupils understand the relative bearing of all the counties in the Province, and more especially the position of their own and the adjoining counties.

FOURTH STEP.

By this time pupils may be fairly supposed to take a lively and intelligent interest in the exercise, and be prepared to enter upon the next stage, that of drawing countries and continents.

Having formed the outline, the details should be filled in only as the lesson proceeds, and no attempt should be made to complete a map at one sitting.

For school tests, facility and rapidity in sketching proportionate outlines, without mechanical assistance, is more desirable than very fine work, and scholars should be practised in drawing on the blackboard, subject to the criticism of the class.

Copy-book Part 1 contains blanks for the first exercise, and Part 2 blanks for the finished copy. Further copies may be made on different scales as an exercise in proportion.

The order in which the maps should be taken, after completing the province, is:—The Dominion, North America, South America, Europe, the British Islands, Africa, Asia, and Australasia.

*Campbell's County Maps are all drawn on a uniform scale of ten miles to the inch.

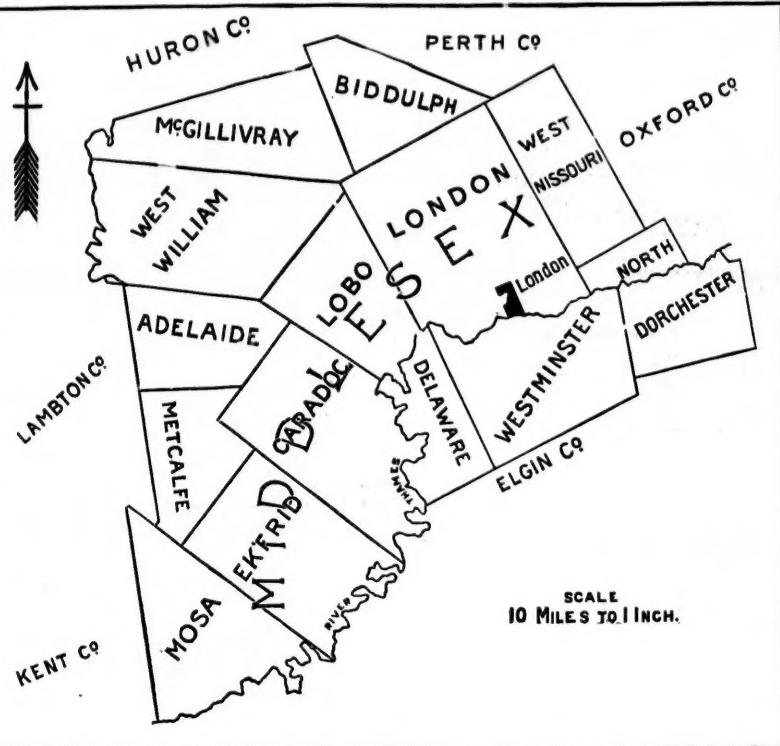


DIAGRAM 4.

To secure true corners to the map and to the squares, a piece of cardboard not more than six inches long may be cut as in the annexed figure.

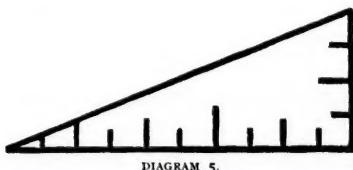


DIAGRAM 5.

A good pencil and a piece of India rubber are necessary, and India ink is preferable to the common ink. When colors are used only three are required: red, blue, and yellow, and from these various combinations can be made. The colors or India ink should be rubbed down with clear water, and a flat brush is preferable, except for outlines.

Until the maps can be drawn neatly, and the letters be well formed, no color should be employed, and even then only in home exercises.

A well-drawn map in black and white is much preferable to one with tawdry display of color.

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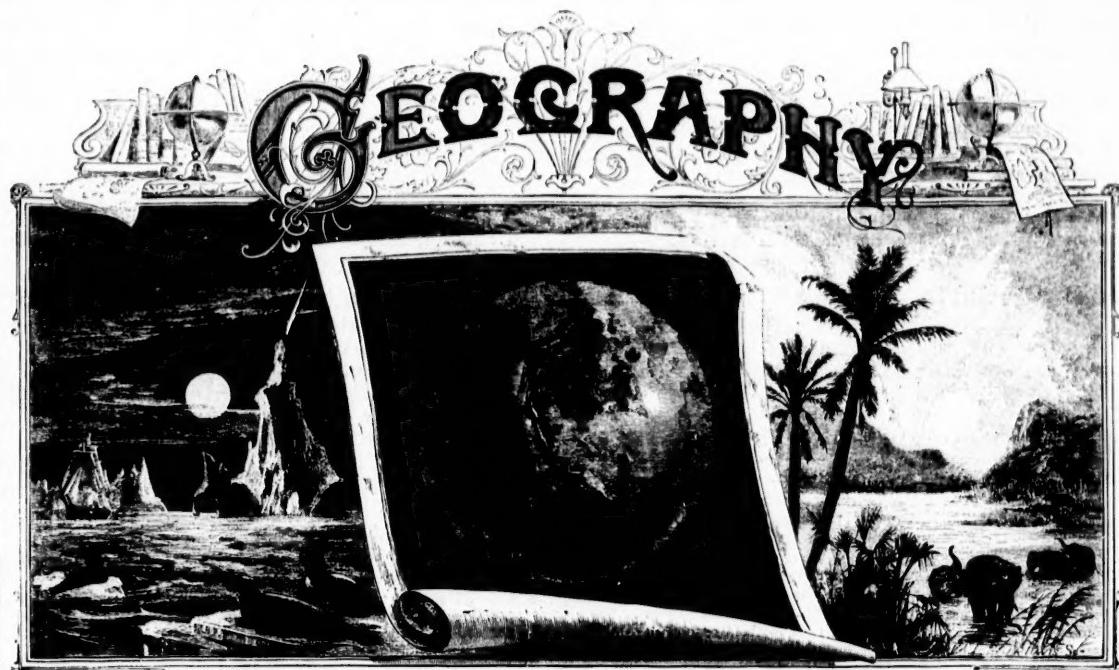
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A Description of the Earth.

Geography is a description of the Earth, or World we live in; its surface, its countries, and its inhabitants.

Geography also treats of the Earth in its relation to the Sun; of the air or atmosphere that surrounds it; of the plants, animals, and minerals that are found upon it; and of the divisions made by man, with their different governments, institutions, industries, and commercial relations.

Geography is divided into three parts, and is classified as follows:—

1. **Mathematical Geography**, which treats of the shape, size, and motions of the Earth; the methods of determining the position of places, and of representing on globes and maps the surface of the Earth in whole or in part; together with those particulars which relate to it as a Planet, or member of the Solar System. This branch of Geography is connected with Astronomy and of Mathematics.

2. **Physical Geography**, which treats of the natural features of the Earth, the divisions of land and water and the particulars which refer to them, the atmosphere, the climate, and the distribution of plants, animals and minerals upon the earth's surface. This branch of Geography is connected with Natural History and Natural Philosophy.

3. **Political Geography**, which treats of the Earth as the abode of mankind, of its division into countries, of all particulars that relate to these countries and their inhabitants, in regard to cities, commerce, manufactures, religion, population, and government, and of all matters pertaining to man as a political or social being. This branch of Geography is connected with History and Political Economy.

MATHEMATICAL GEOGRAPHY.

I.—THE EARTH, ITS SHAPE AND SIZE.

The **Shape** of the Earth is round, like that of a ball or globe, but slightly flattened at the poles.

We know that the Earth is round from the following facts:—

(a). Men have travelled round it. By continuing their course in one direction, to the east or west, they have arrived at the place from which they set out.

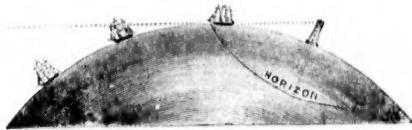
(b). When a ship sails away from land, the hull or body disappears first, then the sails, and finally the tops of the masts.

(c). When the shadow of the Earth is cast upon the Moon by the Sun, that is, when an Eclipse of the Moon occurs, the shadow is always found to be round.

(d). When engineers cut a canal, they have to allow a dip of eight inches to every mile, so as to keep the water on an apparent level.

The Earth measures nearly 8,000 miles in diameter, and nearly 25,000 miles in circumference. The entire surface of the Earth comprises nearly 200,000,000 square miles.

The Earth is not a perfect sphere, but is slightly flattened at the poles, or in shape similar to an orange. It is therefore called an OBLATE SPHEROID; *spheroid*, meaning like a sphere, and *oblate*, flattened at two opposite sides.



In whatever direction the eye is turned, there is a limit beyond which objects on the surface are hidden from view, on account of the roundness of the Earth. The boundary of our vision seems to form a line, which can be most plainly observed at sea. This line, called the **Horizon**, forms the circumference of a circle, of which the observer is the centre.

It is owing to the great size of the Earth that the small part we can take in at one view appears to be flat; and it is owing to what is called the **Attraction of Gravitation**, by which every object on the surface is drawn towards the centre, that men can retain their foothold on opposite sides of the Globe.

DEFINITION OF TERMS.

A **Sphere** or **Globe** is a body bounded by a curved surface, every point of which is equally distant from a point within, called the **CENTRE**.

The **Diameter** of a Sphere is a straight line passing through the Centre, and terminating at opposite points of the surface.

The **Circumference** of a Sphere is a line passing round the surface, and dividing it into two equal parts. (See illustration, p. 3.)



II.—THE SOLAR SYSTEM.

The Earth is one of a number of bodies similar in shape, but varying in size, that revolve round the Sun at different distances. These bodies are called **Planets**, and they require a greater or less time to make the revolution, according to their distance from the Sun.

These **Planets**, which we see at night as Stars, have no heat or light of their own, but, like the Earth, derive both from the Sun.

The Planets form only a small proportion of the Stars we see; the others are called **Fixed Stars**. They shine with their own light and are supposed to be centres of systems similar to ours.

The **Sun** is the centre of what is termed the **Solar System**: it shines with its own light.

The **Moon** revolves round the Earth, and has a double motion, as it follows the Earth while the latter moves round the Sun. The light we get from the Moon is not its own, but is the reflection of the Sun's light upon its surface.

III.—DIRECTION.

In order to indicate in what direction one place is from another, certain words are used:—North, South, East, and West. These are called the **Cardinal** (chief) **Points**.

The Sun apparently rises in the **East**, and sets in the **West**. In this country at noon it is in the **South**, and the direction in which the shadow of any object is cast is **North**. To any one facing the North, the East is on the right hand, and the West on the left.

At night the North may be found by means of the North or **Pole Star**, towards which the Axis of the Earth always points.

When neither Sun nor Stars are visible, the cardinal points may be found by means of the **Mariner's Compass**. The card attached to the magnetic needle shows these points, and this needle being delicately balanced on a pivot so as to swing freely, has the property of always pointing to the North or nearly so, and carries the card with it. When North is found, all the other points can be read from the card.



West and South. These points are again subdivided, as may be seen in the accompanying illustration.

IV.—MOTIONS OF THE EARTH.

The Earth is commonly said to have two motions: the **Daily**, or **Diurnal**; and the **Yearly**, or **Annual** **Motion**.

The **Daily Motion** of the Earth is the rotation or turning round upon its **Axis**, so that each part of it is alternately turned towards the Sun, and then away from it.



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Intermediate Points are:
half-way between North and South; **North-West**, half way between North and West; **East**, half way between South and East; and **South-East**, half way between South and East, half way between East and South; and **South-West**, half way between West and South; and **South**, half way between East and South, and subdivided, as may

be required.

We have two motions:
one daily, or **Annual**

as the rotation or
each part of it is
around the Sun, and then away

The **Axis** of the Earth is its shortest diameter, the extremities of which are called respectively the **North** and **South Poles**.

Owing to its rapid motion the Earth has become slightly expanded at the Equator and correspondingly flattened at the poles, the difference in diameter at the Poles as compared with that at the Equator being about 27 miles.

This daily rotation causes the succession of **Day** and **Night**.

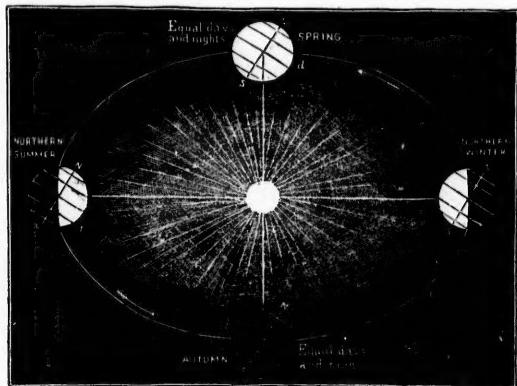
The direction of the motion is from West to East, and this makes the Sun appear to rise in the East and set in the West, although it is the Earth that moves and not the Sun.

The **Yearly Motion** of the Earth is its revolution in its **Orbit**, or path round the Sun. Each revolution requires about $365\frac{1}{4}$ days, which we call a year.

The Earth's yearly revolution is made with its axis inclined to the **Plane**, or level surface included within the Orbit, and always pointing in the same direction, towards the North Star.

This causes the **change of seasons**, as the direction in which the Sun's rays strike any part of the Earth is constantly changing. (See p. 2.) The inclination is $23\frac{1}{2}$ degrees. (See Def., p. 4.)

According as these rays are more nearly perpendicular, the more heat they impart.



The above diagram shows the Earth at four points of its orbit. In each, the axis N S is inclined to the plane of the orbit (deviating from the perpendicular about $23\frac{1}{2}$ °), and points in the same direction.

At *a*, the Earth's position on June 21st, the North Pole is turned toward the Sun. The inclination of the axis being $23\frac{1}{2}$ °, the Sun's rays are now perpendicular at places on a line $23\frac{1}{2}$ ° North of the equator; the Sun at noon is here directly overhead. This line, from the fact of the Sun's appearing to turn South after reaching it, is called a Tropic (*turning-line*), and it is distinguished as the **Tropic of Cancer**. Summer now reigns in the North, winter in the South. The circle of illumination (*refer constantly to the diagram*) extends $23\frac{1}{2}$ ° on the opposite side of the North Pole, and there fixes the position of what is called the **Arctic Circle**. Regions north of the Arctic Circle remain within the circle of illumination notwithstanding the rotation of the Earth, and hence have a day 24 hours long. Regions near the South Pole are not

brought within the circle of illumination by the Earth's rotation, and hence have a night 24 hours long.

In three months the Earth reaches *b* (Sept. 22nd). The Sun's rays are now perpendicular to the equator, and days and nights are everywhere equal; this is the period of the northern autumn and southern spring.

Three months more bring the Earth to *c* (Dec. 21st). The conditions of the position at *a* are now reversed. The South Pole is turned toward the Sun, whose rays are perpendicular to places on a line $23\frac{1}{2}$ ° South of the equator. The Sun appears to turn North after reaching this line, and this turning-line is distinguished as the **Tropic of Capricorn**. The South has its summer, the North its winter. The circle of illumination extends $23\frac{1}{2}$ ° on the opposite side of the South Pole, and fixes the position of what is known as the **Antarctic Circle**. South of the Antarctic Circle the day is 24 hours long, while North of the Arctic Circle the night is 24 hours long.

Still moving East, the Earth on March 20th reaches *d*, when the light once more spreads from pole to pole, and day and night are everywhere equal, or twelve hours long. The solar rays are now again perpendicular to the equator, and slant equally at the two tropics. Spring prevails in the North, autumn in the South.—Observe that *the southern season is always the opposite of the northern*.

The **Tropics**, then, are small circles $23\frac{1}{2}$ ° from the equator, being the limits beyond which the Sun's rays never fall perpendicularly on the Earth's surface. The Arctic and Antarctic Circles, called the **Polar Circles**, are $23\frac{1}{2}$ ° from the North and South Poles respectively. The length of the longest day at the Polar Circles is 24 hours, and from these circles toward the equator it gradually diminishes to 12 hours. At Toronto, the actual length of the longest day is 16 hours and 20 minutes, and of the shortest 8 hours and 56 minutes.

A **Plane** is a surface upon any part of which a straight line may be drawn.

A **Circle** is a plane bounded by a curved line, all points of which are equally distant from a point within, called the **Centre**.

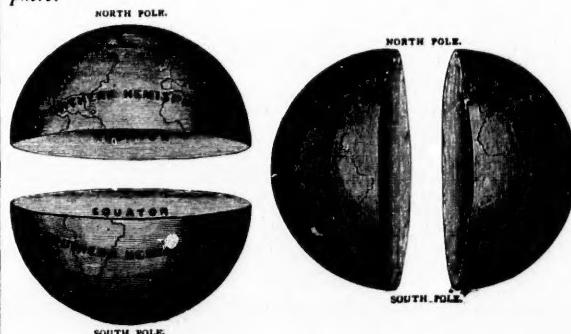
V.—GEOGRAPHICAL CIRCLES.

Geographical Circles are lines imagined to be drawn on the surface of the Earth. They consist of Great Circles and Small Circles.

A **Great Circle** is one that divides the Earth into two equal imaginary parts. Each part is called a *Hemisphere*, or *half-sphere*. The great circles are usually the *Equator* and the *Meridians*.

A **Small Circle** is one that divides the Earth into two unequal parts. The small circles are usually the *Parallels*.

The **Equator** is the great circle midway between the Poles. It divides the Earth into a *Northern Hemisphere* and a *Southern Hemisphere*.



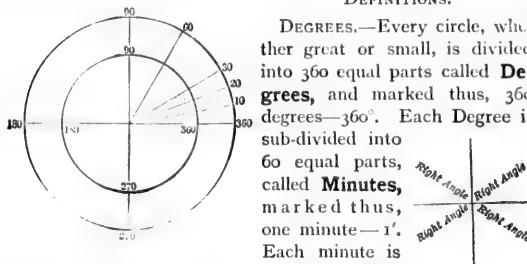
MATHEMATICAL GEOGRAPHY.

Meridian Circles are great circles crossing the Equator at right angles, and passing through the Poles. Each divides the Earth into an Eastern and a Western Hemisphere.

A **Meridian** is half a Meridian Circle, and extends from one Pole to the other.

Parallels are small circles parallel to the Equator. They are drawn in the same direction as the latter, and each part is always equidistant from it. The principal Parallel are the two *Tropics* and the two *Polar Circles*.

The **Direction** of the Equator and Parallels on maps, whether they be represented by straight or curved lines, always indicates due East and West and that of the Meridians, due North and South.



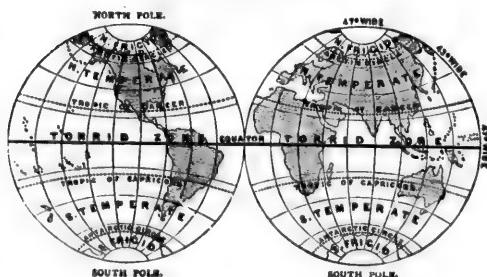
divided into 60 equal parts, marked thus, one second— ${}^{\prime \prime}$.

RIGHT ANGLE. A Right Angle is formed by two lines perpendicular to each other. Four Right Angles exactly fill the space round any point.

VI.—ZONES.

The Tropics and Polar Circles divide the surface of the Earth into five parts. These divisions are called **Zones** (belts), as they are belts round the Earth parallel to the Equator.

MAP OF THE ZONES.



They are named according to the difference in their temperature. As the heat diminishes according to the distance from the Equator, the Zones are distinguished as **Torrid** (parched), nearest the equator; **Temperate**, midway between the Equator and Poles; and **Frigid** (frozen), round the Poles and farthest away from the Equator.

The **Torrid Zone** lies between the Tropic of Cancer and the Tropic of Capricorn, and is 47° in width, representing the difference in the inclination of the axis of the Earth to the Sun, $23\frac{1}{2}^{\circ}$ north and $23\frac{1}{2}^{\circ}$ south. It thus forms a central belt about 3,200 miles in width.

The sun is always directly overhead in some part of the Torrid Zone.

There are two **Temperate Zones**, North and South, which are each 43° , or, nearly 3,000 miles wide.

The **North Temperate Zone** lies between the Tropic of Cancer and the Arctic Circle.

The **South Temperate Zone** lies between the Tropic of Capricorn and the Antarctic Circle.

According to the inclination of the axis of the Earth to the Sun, it is winter in one Temperate Zone when it is summer in the other. Thus, at Christmas time, it is winter in Canada, but summer in Australia, as the sun's rays fall more obliquely on the northern hemisphere than on the southern.

There are also two **Frigid Zones**, which are each $23\frac{1}{2}^{\circ}$, or, nearly 3,000 miles wide, representing the variation of the inclination of the axis of the Earth to the Sun.

The **North Frigid Zone** lies to the north of the Arctic Circle, and the **South Frigid Zone** to the south of the Antarctic Circle.

The Zones have certain general characteristics, though in passing from one to another the difference is not immediately marked.

The Frigid Zones, receiving the sun's rays most obliquely, are extremely cold, and have but a scanty vegetation—in parts none at all. They are characterized by the longest and the shortest days and nights; fur-bearing animals; and a very sparse population, dwarfish in stature and intellect. So far as known, the South Frigid Zone is uninhabited by man.

The Temperate Zones are characterized by a moderate climate; flourishing vegetation, including important staple products, the grains, potatoes, cotton, tobacco, tea, and the hardier fruits and vegetables; the four seasons; the domestic, and the smaller and less fierce wild animals. These zones are the principal seats of industry, and are peopled by the most cultivated nations.

The Torrid Zone, receiving the sun's rays most directly, is characterized by great heat and luxuriant vegetation; dense forests; and tropical fruits, including oranges, lemons, figs, dates, pineapples, and bananas. Among its important products are sugar, coffee, rice, cotton, and spices. It may be said to have only two seasons, a wet and a dry. It contains innumerable insects, poisonous reptiles, and the largest and fiercest wild animals. Its inhabitants generally lack energy and enterprise.

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VII.—LATITUDE—LONGITUDE.

In order to determine the exact position of any place upon the Earth, **Latitude** and **Longitude** are required.

These represent lines drawn at right angles to each other, and the point of intersection is the position sought for.

Latitude is distance North or South of the Equator.

This distance is marked by the Small Circles, or Parallels, which may be at any distance from the Equator, but are always parallel to it.

As distance north and south of the Equator can only extend to the Poles, so the highest latitude of any given place cannot exceed the distance of either Pole from the Equator, which is 90° N. or S.

The length of a degree of latitude is $69\frac{1}{2}$ miles, but owing to the flattening of the Poles the degree is there a little longer. It is equal to the $\frac{360}{360}$ part of the circumference of the Earth.

Longitude is distance East or West from a Prime or First Meridian, and is also measured by degrees, minutes, and seconds.

Any given Meridian may be called the **Prime Meridian**, but that of the Observatory at Greenwich, near London, England, is usually taken for that purpose.

Other countries sometimes use a Prime or First Meridian of their own. France uses the Meridian of Paris, and the United States that of Washington.

The divisions of Longitude are marked by Meridians, and are reckoned both East and West from the Prime Meridian. As the circumference of the earth is 360°, the greatest Longitude east or west is half that distance, 180° E. or W.

The length of a degree of Longitude varies according to the distance from the Equator. At the Equator these degrees measure $69\frac{1}{2}$ miles, and gradually diminish towards the Poles, where all the Meridians meet.

The length of a degree of longitude at every ten degrees of latitude is shown on the outside circles of the maps of the Hemispheres (Physical).

VIII.—GLOBES AND MAPS.

The surface of the Earth may be represented by **Globes** and **Maps**.

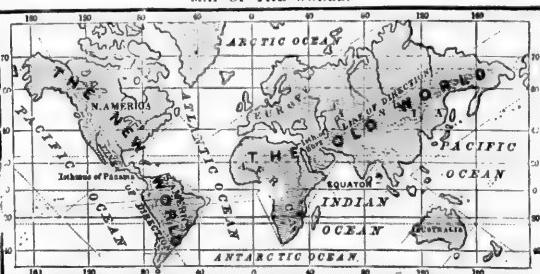
A **Globe** is a sphere representing the form of the Earth, upon which the circles and the principal features of the land and water are shown.

A **Map** is a representation in whole or in part of the Earth's surface on a plane.

As a plane is a flat surface, any portion of a sphere cannot be accurately drawn upon it. Small portions of the Earth's surface can be more correctly represented upon maps than large ones.

Maps are usually so drawn that the North is towards the top, and the South towards the bottom; the East is therefore to the right hand side, and the West to the left.

MAP OF THE WORLD.



MERCATOR'S MAP (see Illustration), constructed for the use of mariners and named after its distinguished inventor, shows all parts of the Earth's surface at one view and in their true bearings, but as the Meridians are drawn parallel to each other, and the Parallels of latitude are placed slightly further apart, as they recede from the Equator to the Poles, the form of the continents and oceans is distorted by their expansion towards the Poles.

Figures showing the latitude are placed at the sides of the map; those showing the longitude at the top and bottom. The exception to this is in the maps of the Eastern and Western Hemispheres, where the longitude is marked on the Equator.

ANALYTICAL REVIEW.

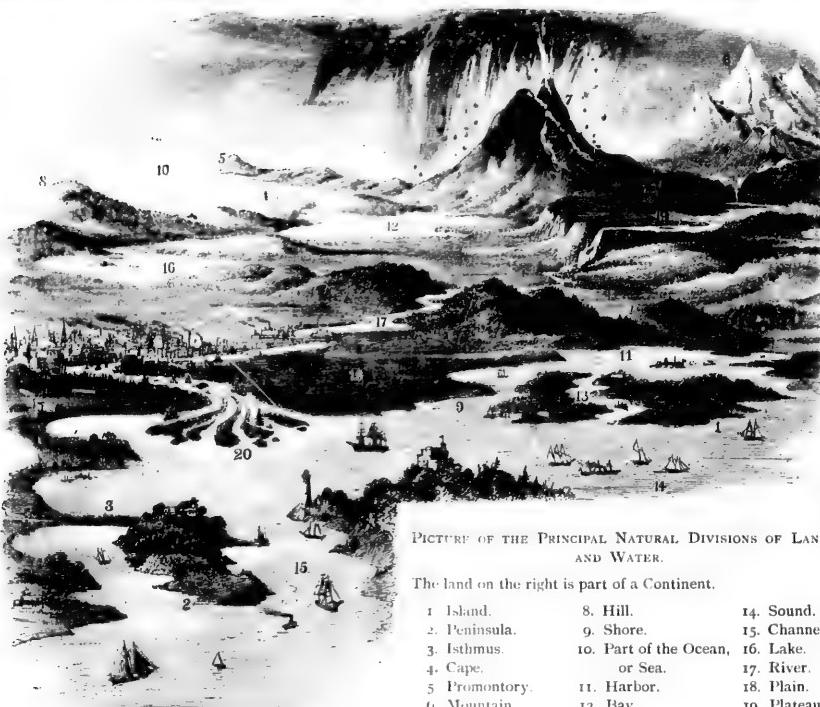
Geography.	Define	Mathematical. Physical Political.
	Divisions	

MATHEMATICAL GEOGRAPHY.

I. The Earth.	Shape:	a. b. c. d. Diameter. Circumference. Extent of Surface.
	Proofs of Shape.	

I. The Earth.	Size	Oblate Spheroid. Horizon. Apparent flatness of the Earth. Attraction of Gravitation.

TO THE TEACHER.—Let the pupils each treat a topic, using their own language, and not following too closely the words of the text. This and similar future reviews may also form good composition exercises.



PICTURE OF THE PRINCIPAL NATURAL DIVISIONS OF LAND AND WATER.

The land on the right is part of a Continent.

- | | | |
|----------------|--------------------------------|--------------|
| 1. Island. | 8. Hill. | 14. Sound. |
| 2. Peninsula. | 9. Shore. | 15. Channel. |
| 3. Isthmus. | 10. Part of the Ocean, or Sea. | 16. Lake. |
| 4. Cape. | 11. Harbor. | 17. River. |
| 5. Promontory. | 12. Bay. | 18. Plain. |
| 6. Mountain. | 13. Strait. | 19. Plateau. |
| 7. Volcano. | | 20. Delta. |

ANALYTICAL REVIEW—continued.

DEFINITIONS.	<p>{ Sphere. Diameter. Circumference.</p> <p>II. Solar System.</p> <p>{ The Earth as a Planet Planets. Fixed Stars Sun. Moon.</p> <p>III. Direction.</p> <p>{ Cardinal Points. How distinguished Pole Star. Mariner's Compass Intermediate Points</p> <p>IV. Motions.</p> <p>{ Number. DAILY { Define. Axis. Variations of the Earth's Diameter. Day and Night Direction.</p> <p>YEARLY { Define. Direction. Change of Seasons Tropics; why named? Polar Circles; why named. Longest and shortest days.</p> <p>V. Geographical Circles.</p> <p>{ Define. (Great Circles.</p>	<p>V. Geographical Circles <i>cont.</i></p> <p>{ Small Circles. Equator. Meridian Circles. Meridians. Parallels. Direction.</p> <p>VI. Zones.</p> <p>{ Degree. Right Angle. How divided. How named. Position. CHARACTERISTICS.</p> <p>Frigid. Temperate. Torrid.</p> <p>VII. Latitude and Longitude.</p> <p>{ Use. Define. LATITUDE { Define. How marked. Highest Latitude. Length of Degrees.</p> <p>LONGITUDE { Define. Prime Meridians. How marked? Length of Degrees.</p> <p>VIII. Globes and Maps.</p> <p>{ Use. GLOBE. MAP { Describe. Describe. Accuracy. Form. Mercator's Figures.</p>
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PHYSICAL GEOGRAPHY.

SURFACE OF THE EARTH.

The surface of the earth consists of **Land** and **Water**. About one-fourth is land and nearly three-fourths water.

The entire area of Land on the globe is estimated at 53,000,000 square miles, and that of Water at 144,000,000.

The masses of Land are so situated that in representing them in maps they are usually shown in two groups, which are called respectively the **Eastern** and **Western Hemispheres**.

The larger group lies in the Eastern Hemisphere, and is often called the **Old World**. The smaller lies in the Western Hemisphere, and is called the **New World**.

If the Earth's surface be divided into Northern and Southern Hemispheres, about three times as much land will be found north of the Equator as there is south of it. (See maps of Hemispheres.)

I.—DIVISIONS OF THE LAND.

The **Land** is distributed upon the earth's surface in irregular masses, which, according to their size and formation, are known as **Continents** or **Islands**.

A **Continent** is a large mass of land divided into countries.

There are six Continents, viz.: **North America**, **South America**, **Europe**, **Asia**, **Africa**, and **Australia**.

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SIONS OF THE LAND.

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re are six Continents, **North America**, **South America**, **Europe**, **Africa**, and **Australia**.

Some geographers consider North and South America as one continent, and Australia as an island, thus reducing the number to four.

The Continents may be grouped in three pairs, namely: North and South America in the West; Europe and Africa in the Centre; with Asia and Australia in the East. Each pair stretches from the Arctic Regions to the middle latitudes of the Southern Hemisphere, and terminates in a comparatively narrow point.

An **Island** is a portion of land entirely surrounded by water, as Newfoundland, Prince Edward Island, or Vancouver Island.

Islands are of two classes: **Continental**, or those which are situated near one of the continents, of which they appear to be detached portions, as the British Islands; **Oceanic**, or those lying far off in the oceans, and apparently having no connection with any continent, as the Bermuda Islands or St. Helena.

An **Archipelago** is a group of islands situated near to one another, as the West India Islands.

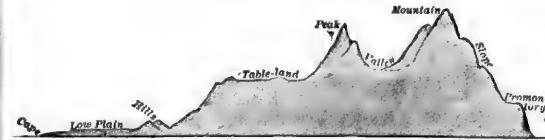
Both continents and islands have a **Coast-line**, the different parts of which are classified according to their shape into **Peninsulas**, **Capes**, and **Isthmuses**.

A **Peninsula** is a portion of land almost surrounded by water, as Nova Scotia, and the south-western part of Ontario.

A **Cape** is a portion of land which juts out into the sea or into great lakes, as Cape Sable, Cape Gaspé, or Cape Hurd.

A mountainous or rocky cape is called a **Promontory**.

An **Isthmus** is a narrow neck of land connecting two larger portions, as the Isthmus of Chignecto, or the Isthmus of Panama.

II.—ELEVATIONS OF THE LAND.

The land of both continents and islands is divided, according to its elevation, into **Mountains**, **Hills**, **Table-lands** or **Plateaus**, **Valleys**, and **Lowland Plains**.

The height of these elevations is measured from the surface or level of the sea. Those parts of the earth's surface in the great continents which are not more than 1,000 feet above the sea level are called **Lowlands**; those above that height, **Highlands**.

A **Plain** is a tract of land, which is level, or broken only by slight elevations. Those portions of a plain adjoining mountains are generally more elevated and hilly than other parts, as the Plains of the Canadian North-West.

A **Plateau** or table-land is an elevated plain generally from 3,000 to 8,000 feet above the level of the sea, though sometimes higher, as the Plateaus of Thibet and of Bolivia.

Some plateaus are comparatively level, others are broken by mountain ranges of greater or less elevation and extent.

Broad, grassy plains destitute of trees are called **Prairies** in North America, **Llanos** and **Pampas** in South America, or **Steppes** in Asiatic Russia. Steppe have a very scanty vegetation. **Selvas** are the forest plains of the Amazon in South America. **Swamps** and **Marshes** are wet lands, as the Dismal Swamp in Virginia. A **Desert** is a large barren plain, as the Sahara in Africa. An **Oasis** is a fertile spot in a desert.

A **Mountain** is a mass of land which rises to a considerable height above the surrounding country, as Mount Hooker in British Columbia.

A **Hill** is a lesser elevation than a Mountain, as the Laurentide Hills.

A **Mountain Range** or **Chain** is a connected series of mountains, which usually rise abruptly from the surrounding country, as the Rocky Mountains. The **Top** or **Crest** is often very irregular, the higher parts being called **Peaks**, **Mounts**, or **Mounds**, and the depressions **Passes**.

The beginning of the ascent of a mountain or mountain range is called its **Base**, the highest part its **Summit**, and the inclined sides its **Slope**.

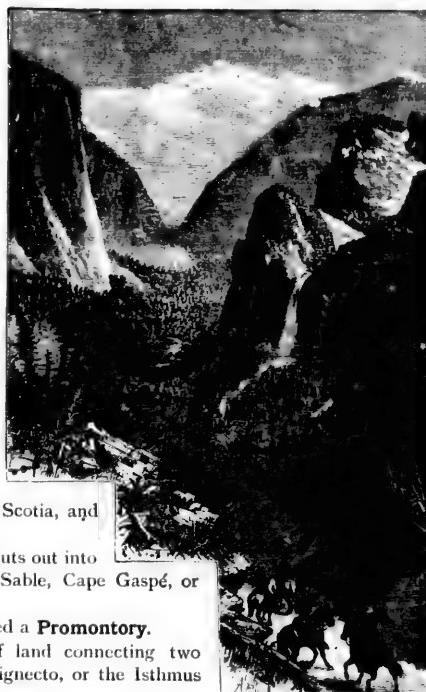
A **Volcano** is a burning mountain, usually cone-shaped, from which issue at times flames and smoke, streams of melted rock (lava), cinders, powdered rock (ashes), and other substances, through a wide opening in the top or sides called a **Crater**.

A volcano may remain inactive for many years, emitting only steam and gases from the crater: when showers of ashes and streams of lava are thrown out, the volcano is said to be in *eruption*.

A **Valley** is a hollow tract of land between hills or mountains. The deep valleys among the Rocky and the Cascade Mountains are called **Cañons** (can-yons).

Valleys furnish the pathway of streams or rivers, although in countries where little rain falls many dry valleys are found.

A **Watershed**, sometimes called a **Divide**, is a ridge of land separating the streams on its slopes from each other.



YOSEMITE VALLEY.



BALBOA DISCOVERING THE PACIFIC.

III.—DIVISIONS OF THE WATER.

The waters on the surface of the earth are divided into **Ocean Waters**, which are salt, and **Drainage Waters**, which are fresh.

The continents are surrounded by a vast body of salt water, which covers nearly three-fourths of the Earth's surface. This is called the **Sea**, or the **Ocean**.

This body of water is divided into five principal parts, called the **Atlantic**, the **Pacific**, the **Indian**, the **Arctic**, and the **Antarctic** Oceans.

The Arctic and Antarctic Oceans differ from the others in not being great Ocean Basins; the former is properly a continuation of the Atlantic Ocean, and the latter is the central body from which the great oceans diverge northward.

The Ocean is traversed by currents, or vast streams, which keep the waters in constant circulation. The bed of the Ocean, like the surface of the land, has its heights and hollows, the greatest depth hitherto sounded being about $5\frac{1}{2}$ miles.

IV.—COAST WATERS.

The irregularities of the coast cause various smaller divisions of the Sea. Large arms of the Ocean extending into the land are called **Seas**, **Gulfs**, or **Bays**.

Sea may be enclosed within the general form of a continent, as the Mediterranean or the Black Sea; or it may be part of the Sea on the borders of a continent and separated from the Ocean by a belt of islands, as the Caribbean or the North Sea.

A **Gulf** is a part of the sea, which is almost surrounded by land, as the Gulf of St. Lawrence or the Gulf of Mexico.

A **Bay** is a part of a Sea, Ocean, or Lake, usually less enclosed than a Gulf, as the Bay of Naples, Bay of Biscay, Bay of Fundy, or Georgian Bay.

The terms Gulf, Bay, and Sea are frequently applied to arms of the Sea indiscriminately, as in the case of Hudson Bay, the Gulf of St. Lawrence, and the Caribbean Sea.

A small, deep bay, so sheltered by land as to be safe for vessels in time of storm, is called a **Harbor**, as Halifax Harbor, or St. John's (Newfoundland) Harbor. A **Roadstead** is a larger area of water furnishing sheltered anchorage for vessels. A **Bight** is an open bay. Some small, shallow bays are called **Inlets** and **Coves**.

River mouths, when broad and deep, are called **Estuaries**, and form excellent harbors, as the St. Lawrence, the St. John (New Brunswick), or the Hudson (New York).

A water passage, usually narrow, connecting two bodies of water is called a **Strait**, **Channel**, **Sound**, or sometimes **Gut**, as the Strait of Belle Isle, the English Channel, Long Island Sound, and Gut of Canso.

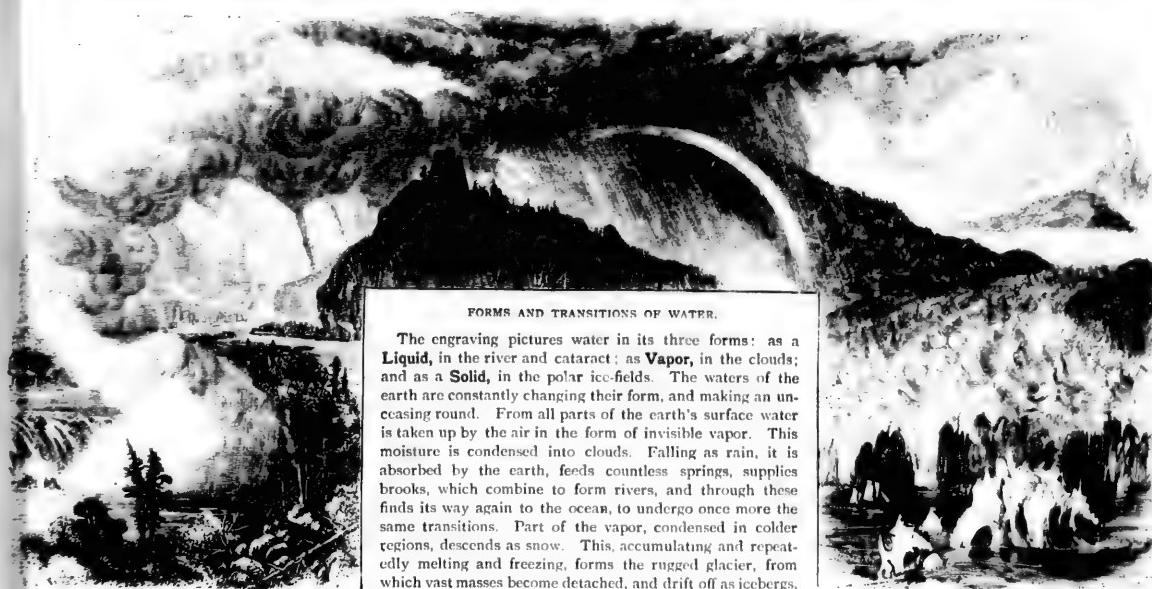
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V.—INLAND WATERS.

Besides the Ocean which consists of salt water, there are on the surface of the Earth inland waters which drain—that is, flow—into the ocean; hence they are called Drainage Waters. These are fresh, and are called **Springs, Streams, Rivers, and Lakes.**

Water, in the form of **Springs, Streams, Rivers, and Lakes**, is found in greater or less abundance on the surface of both continents and islands. Rising originally from the Sea in the form of **Vapor**, it is carried by the winds to the land, upon which it falls in the form of **Dew, Rain, or Snow**; then working its way down the slopes of the land in the form of streams, it gradually returns to the Sea.

Springs are formed from rain or melted snow lying upon the surface of the higher ground, which enter the Earth through loose, porous soil, or through seams in the rocks. The water gradually descends until it meets a bed of rock or clay which it cannot penetrate; after flowing along this bed, or through crevices, the water finally comes to the surface in the shape of a **Spring**.

Springs are most numerous in the slopes of mountains or hills. In level lands the water which enters the ground does not readily find its way to the surface again.

Geysers are boiling springs, which, at intervals of time, and from some internal commotion, throw up great columns of boiling water, sometimes to the height of 140 feet.

A **River** is a large stream of fresh water, flowing down the

slope of the land to a Lake or to the Sea, as the **Grand River** (Ontario), and the **St. Lawrence River**.

Rivers are formed by the union of smaller streams produced by springs, rains, and the melting of snow and ice upon high mountains during summer, or by the overflowing of lakes, whose superabundant water they carry to the Sea.

Small Rivers are called *Rills, Rivulets, Brooks, and Creeks.*

The beginning of a River is called its **Source** or **Head**; the termination is called its **Mouth**. Some rivers have two or more mouths. The land between the mouths is called a **Delta**, owing to its triangular shape and resemblance to the Greek letter Δ , as in the case of the River Nile. The meeting of two rivers is called their **Confluence**.

The bottom of a river is called its **Bed**, and the land on each side is called its **Banks**. The **Banks** are distinguished as **Right** and **Left**, according as they are situated to an observer looking down the stream.

A **Rapid** is the descent of the water over a steep slope in the bed of a stream. A **Fall, Cataract, or Cascade** is the descent over a precipice, as at the Falls of Niagara.

A **Tributary**, or **Affluent**, is a smaller stream which flows into a larger one.

The **Basin** of a river is the land which is watered and drained by it and by its tributaries.

The Basin of a river is always bounded on three sides by the **Watersheds**, which separate it from the adjacent basins.

Rivers are useful for navigation, for water-power to turn machinery, for the irrigation of land in the absence of rain, and for affording us certain kinds of fish.

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Glaciers are vast river-like accumulations of ice. They are formed in high mountain valleys by the snow, which, from alternate melting and freezing, becomes a solid mass of ice. This mass, by its own weight, slowly grinds its way down to lower and warmer regions, when it finally disappears.

Glaciers are most numerous in the Frigid Zones, where their lower edges project into the Sea. Here the Tides and Waves wash away their bases, and the overhanging portions at last break off by their own weight and fall into the Ocean as **Icebergs**.

Icebergs are sometimes of enormous size, and are formed in the Arctic and Antarctic regions. They are carried by the winds and currents of the ocean often far away from the place of their original formation.

Greenland is famous for its numerous icebergs, which drift down towards the coast of Newfoundland; but those of the Antarctic Ocean, formed in the unknown lands of the South Pole, are the largest and most numerous. They sometimes rise as high as 300 feet above the water, while seven-eights of their mass is under it. As they reach the warm currents of the ocean, the mass under water gradually melts until the upper part becomes the heavier, when they capsize and show various fantastic forms.

A **Lake** is a body of water, either fresh or salt, accumulated in a basin or depression of the land. The water enters the basin generally by several streams, but usually flows out by a single one, as the St. Lawrence from Lake Ontario.

Some Lakes have no outlet, and these are usually salt, as the Great Salt Lake, Dead Sea, and Caspian Sea.

The heat of the Sun causes evaporation from the lakes as well as from the ocean, and as only pure water is thus carried off, the salt and other mineral matter brought into these lakes by their tributary streams remain there and accumulate. The saltiness of the ocean is in this way accounted for, and experiments made in the Mediterranean Sea are said to prove that the sea is becoming gradually more salt.

That part of the Lake at which the water flows out is called the *Foot*; and the opposite extremity, the *Head*. The land bordering on a lake is called its *Shore*. Along the shore of a great lake, such as Lake Superior, there are *Bays*, *Harbors*, *Capes*, and *Peninsulas*, as there are on the sea-coast; and *Islands* occur, as in Lake Huron.

VI.—OCEANIC MOVEMENTS.

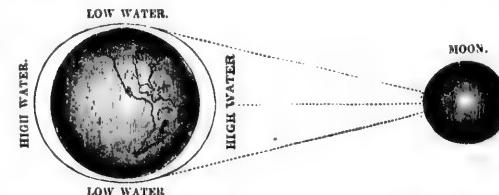
The water of the Sea is constantly in motion; its movements are grouped under three general classes:—
Waves, **Tides**, and **Currents**.

Waves are the alternate rising and falling of successive ridges of water, caused mainly by the wind, and do not affect the Sea to any great depth.

The advance of the wave is the communication of the wave movement to successive portions of the sea, and not, to any considerable extent, except in shallows, an onward movement of the water itself. Thus, a body floating upon the surface of the sea may be seen rising and falling with the waves, with but a slight change of position in the direction towards which the waves seem to be moving.

When waves meet the shallows along the coast, their motion is retarded by the friction on the bottom, hence the top, moving on without support, curls over and breaks in foam upon the beach.

Tides are wave movements, occurring on a vast scale and at regular intervals. They are caused by the action of the Sun and Moon upon successive parts of the ocean, and affecting it to its greatest depths.



The **Tidal Wave**, rising simultaneously on opposite sides of the Earth (180° apart), and advancing westward with the *apparent motion* of the Sun and Moon, recurs at intervals of about twelve hours and twenty-six minutes.

The Moon, being nearest to the Earth, has the greatest influence in the production of the tides. When the Earth, Sun, and Moon are in a line, so that the attraction of both the latter is combined, the highest tides, called *Spring Tides*, occur. This happens twice a month, at new and full moon. When the Sun and Moon attract the water in different directions, and their influence is at right angles to each other, the lowest tides, or *Neap Tides*, occur. These happen during the first and third quarter of the moon.

The period of rising water is called *Flood-tide*, that of receding water, *Ebb-tide*. These periods are each about six hours in duration.

Ocean Currents are the onward flow of vast portions of the water of the ocean, while the adjacent waters remain comparatively at rest. They are like immense rivers flowing through the great ocean basins, and are caused mainly by differences of temperature in Equatorial and Polar regions, and by the action of constant winds.

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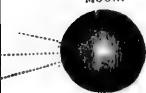
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These currents are of three classes—namely: the **Polar Currents**, which are invariably cold, flowing from the Polar regions towards the Equator; the **Equatorial Currents**, flowing from East to West between the Tropics; and the **Return Currents**, which are warm, flowing from the Equatorial regions towards the Poles. (See Maps of Hemispheres.)

The **Polar Currents** of the Northern Hemisphere generally flow towards the south-west, along the *eastern* shores of the continents. Those of the Southern Hemisphere usually flow towards the north-west, along the *western* shores of the continents.

The *Polar Current* of the Atlantic is much more extensive than that of the Pacific, because of the deep, broad passages from the Arctic Ocean to the Atlantic; while the Arctic Ocean is only connected with the Pacific by a shallow strait, about fifty miles wide.

The **Return Currents** flow towards the north-east in the Northern Hemisphere, and towards the south-east in the Southern Hemisphere. When the *Polar* and *Return Currents* meet in middle latitudes, the former, being colder and consequently heavier than the latter, sinks and becomes an under-current.

The best known are the Currents of the **Gulf Stream** in the Atlantic, and the **Japanese Current** in the Pacific. The first flows in a north-easterly direction from the Gulf of Mexico to Newfoundland, the latter takes the same direction from Japan towards Alaska; then, both continue towards the East until they reach the land, where they diverge southwards and rejoin the Equatorial Currents. The centre spaces are called the Sargasso or Grassy Seas, as they are covered with a dense mass of floating seaweed.

In the northern part of the Indian Ocean the course of the Equatorial Current is interrupted by winds, and by the great peninsula which projects into that part of the Ocean. From March to September the Current flows towards the north-east, while from September to March it flows towards the south-west.

ANALYTICAL REVIEW.

Surface of the Earth.	How divided.	Land. Water.	Top name parts Slope and Base.	
	AREA.....			
I. Divisions of Land.	How shown on Maps.	Define. Name. How grouped.	Name small rivers. Source Mouth. Delta. Bed. Banks. Rapid. Fall, Cataract or Cascade. Tributary. Basin. Basin—how bounded. Value of Rivers.	
	Eastern Hemisphere. Western Hemisphere. Northern Hemisphere. Southern Hemisphere.			
II. Elevations of the Land.	How distributed.	Define. Name parts.	Describe. Where most numerous.	
	CONTINENTS			
III. Elevations of the Water.	ISLAND	Define. Classes.	How formed. What becomes of them. Icebergs of Greenland. Icebergs of the Antarctic Ocean.	
	Archipelago.			
IV. Coast Waters.	COAST-LINE	Define. Name parts.	Define. Salt Lakes. Foot. Head. Shore-line.	
	Peninsula. Cape. Promontory. Isthmus.			
V. Inland Waters.	Name.	Waves. Wave motion. Tides. Tidal Wave. Neap Tide. Flood Tide. Ebb Tide. Spring Tide.	Describe. Classify. Polar. Atlantic and Pacific—compare. Return Currents. Gulf Stream. Japanese Current. Indian Ocean Current.	
	How distinguished.			
VI. Oceanic Movements.	Plain.	Define.	Describe.	
	Plateau.			
VII. Ocean Currents.	Varieties of Plains.	Waves. Wave motion. Tides. Tidal Wave. Neap Tide. Flood Tide. Ebb Tide. Spring Tide.		
	To the TEACHER.—This exercise should be made the basis of a thorough review. Let each pupil treat a topic orally in his own language, and write out the synopsis of the different sections. As a further exercise, an imaginary Continent may be drawn on the black-board, or a wall-map may be used, on which the pupil should point out and name the natural divisions of the land and water.			

PHYSICAL WESTERN HEMISPHERE.

I.—QUESTIONS ON THE MAP.

Coutinents.—What two continents are in the Western Hemisphere? By what isthmus are they connected? What three oceans wash the shores of North America? Which ocean is on the north? On the east? On the west? What ocean bounds South America on the north and east? On the west? What ocean on the south?

Islands.—What large island lies northeast of North America? What island is east of it? What archipelago between Greenland and the continent? What island is near the eastern point of North America? What group southeast? What archipelago lies between North and South America? Which are its two largest islands? What large island is west of North America? What group north of Cuba? What group northeast? What island at the southern end of South America? What group east? What group in the Pacific Ocean near the parallel of twenty north? Of fifty north? Of forty south?

Peninsulas.—What peninsula is in the northwestern part of North America? In the eastern part? In the western part? What two near the Island of Cuba?

Capes.—What cape is at the southern point of Greenland? At the eastern point of Newfoundland? At the southern point of California? What cape of North America is near Asia? What cape is opposite? What cape is the northern point of South America? The eastern point? The southern point? The western point?

Mountains.—What chain of mountains is in the western part of North America? In the eastern part? In the western part of South America? In the eastern part? On which side of South America are there many volcanos? (See red dots on the map.) On which side of North America?

Plains and Plateaus.—What plateau is in the northern part of North America? What low plain in the central part? What high plains west of the central plain? What plateau west of the Rocky Mountains? What is the name of its southern part? What plateau is in the eastern part of South America? In the northern? In the western? What plains are in the southern part? North of the plateau of Guiana? South?

Seas, Gulfs, and Bays.—What bay is west of Greenland? What bay in the Arctic Plain? What gulf west of Newfoundland? South of North America? What island and two peninsulas nearly close that gulf? What sea lies south of the West Indies? Between Alaska and Asia?

Straits.—What strait connects Behring Sea with the Arctic Ocean? At the entrance of Baffin Bay? Of Hudson Bay? Between Cuba and Florida? Between Tierra del Fuego and the continent?

Rivers.—What river flows through the northwestern part of the Arctic Plain? Into what ocean does it fall? What river flows into the Gulf of St. Lawrence? From what lakes? What river flows through the central plain? Into what gulf? What branch has it? What rivers of North America flow into the Pacific Ocean? From what plateaus? Into what ocean do the rivers of South America flow? Which is the greatest river of South America? Through what plain does it flow? What river is north of the Amazon? What river is in the southern part of South America?

Ocean Currents.—What current flows from the Gulf of Mexico? Across what ocean? In what direction? What current flows from Baffin Bay? What current flows northeast of South America? Southeast? West? What current crosses the Pacific near the Equator? Near the parallel of fifty north?

Zones.—What circle crosses the northern part of North America? In what zone is Cuba? The Sandwich Islands? The Mississippi River? In what zones is North America? South America? What continent is crossed by the equator?

Through what waters and past what capes and islands would you sail in going from the St. Lawrence to the Gulf of Mexico? From the Gulf of Mexico to the Rio de la Plata? From the Rio de la Plata to the Galapagos Islands? From the Galapagos Islands to Vancouver Island?

II.—REVIEW EXERCISES.

Continents.—How bounded?

MODEL FOR STATING BOUNDARIES.—South America is bounded on the north by the Caribbean Sea, on the east by the Atlantic Ocean, on the south by the Southern Ocean, and on the west by the Pacific Ocean.

North America? South America?

Islands.—In what direction from the nearest land? By what waters surrounded?

MODEL.—Newfoundland is east of North America, and is surrounded by the Gulf of St. Lawrence and the Atlantic Ocean.

Arctic Archipelago? Greenland? Iceland? Newfoundland? Azores? Bermuda Islands? Bahama Islands? West Indies? Cuba? Hayti? Jamaica? Falkland Islands? Tierra del Fuego? Graham Land? South Victoria? New Zealand Islands? Sandwich Islands? Vancouver Island? Aleutian Islands? Oceanica?

Peninsulas.—From what part of the continent does it project? Into what water, or between what waters?

MODEL.—California projects from the western part of North America, between the Gulf of California on the east and the Pacific Ocean on the west.

Labrador? Florida? Yucatan? California? Alaska?

Capes.—From what land does it project? From what part of it? Into what body of water?

MODEL.—Cape Race projects from the eastern part of Newfoundland into the Atlantic Ocean.

Farewell? Race? St. Lucas? Prince of Wales? Gallinas? Horn? St. Roque? Blanco? East Cape?

Mountains.—In what part of the continent are they? In what direction do they extend?

MODEL.—Appalachian, in the eastern part of North America, extend northeast and southwest.

Appalachian? Rocky? Brazilian? Andes?

Plains and Plateaus.—Where situated?

MODEL.—The Arctic Plain is in the northern part of North America? Arctic Plain? The Great Plains? Central Plain? Plains of the Orinoco? Plains of the Amazon? Plains of La Plata? Arctic Plateau? Western Plateau? Mexican Plateau? Plateau of Guiana? Plateau of Brazil? Plateau of Bolivia?

Oceans.—Of what continents does it wash the shores? Or, around what pole is it?

MODEL.—The Pacific Ocean washes the western shores of North and South America; the Antarctic or Southern Ocean is around the South Pole.

Arctic or Northern? Antarctic or Southern? Atlantic? Pacific?

Seas, Gulfs, and Bays.—What coast does it indent or wash? Of what ocean or other body of water is it an arm?

MODEL.—Hudson Bay indents the northeastern coast of North America, and is an arm of the Atlantic Ocean.

Baffin Bay? Hudson Bay? Gulf of St. Lawrence? Gulf of Mexico? Caribbean Sea? Gulf of California? Behring Sea?

Straits.—Between what lands? What waters does it connect?

MODEL.—Behring Strait, between Asia and North America, connects the Arctic Ocean with Behring Sea.

Behring? Davis? Hudson? Florida? Magellan?

Rivers.—In what continent does it rise? In what part of it? In what mountains? In what direction does it flow? Into what water?

MODEL.—The Missouri River rises in the Rocky Mountains, in the western part of North America, and flows southeast into the Mississippi River. Mackenzie? St. Lawrence? Mississippi? Missouri? Columbia? Fraser? Orinoco? Amazon? La Plata?

Ocean Currents.—In what ocean? In what part of it? In what direction does it flow?

MODEL.—The Brazilian Current, in the northwestern part of the South Atlantic Ocean, flows towards the southwest.

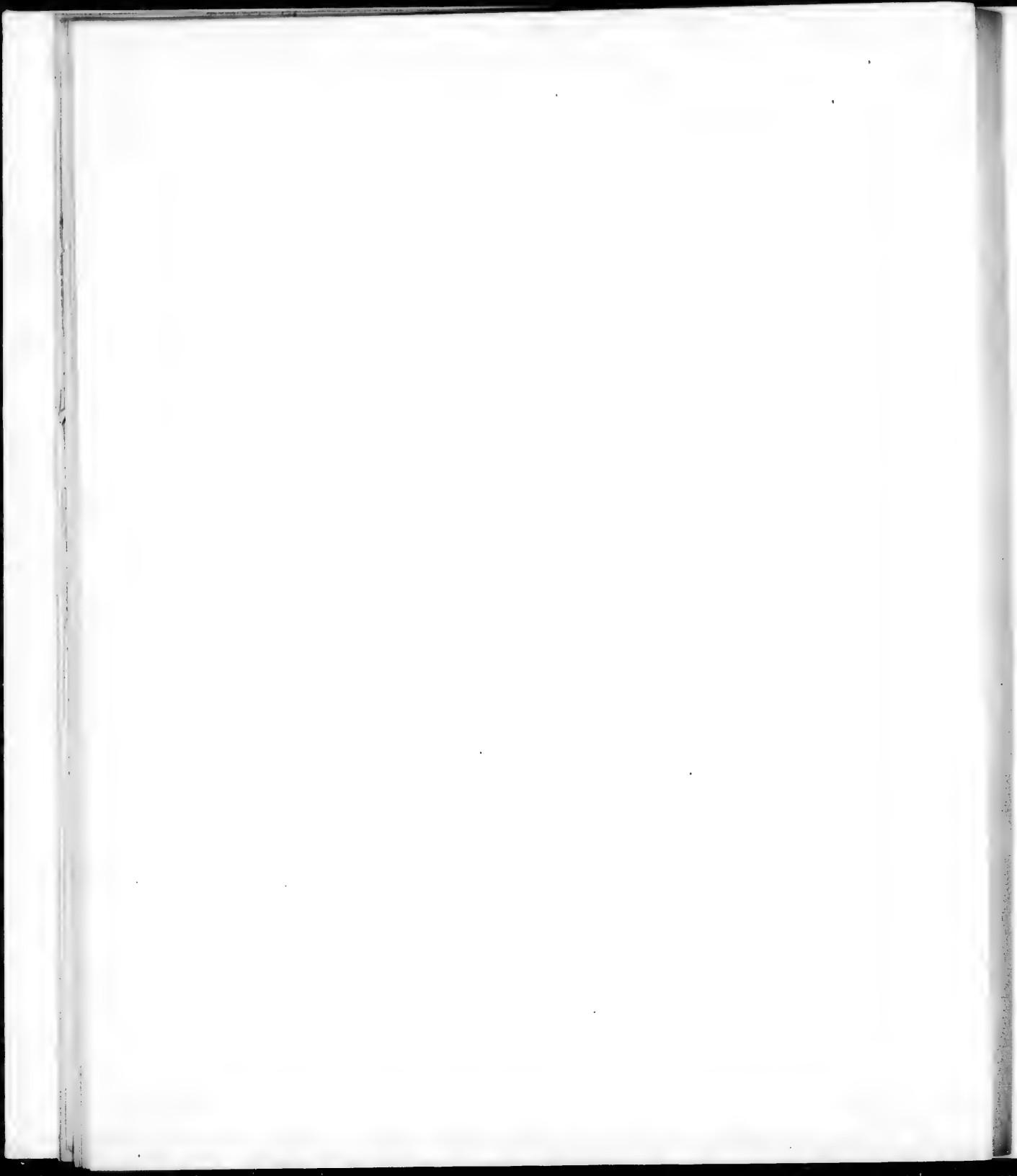
Polar? Gulf Stream? Equatorial? Brazilian? Peruvian? Japan Stream?

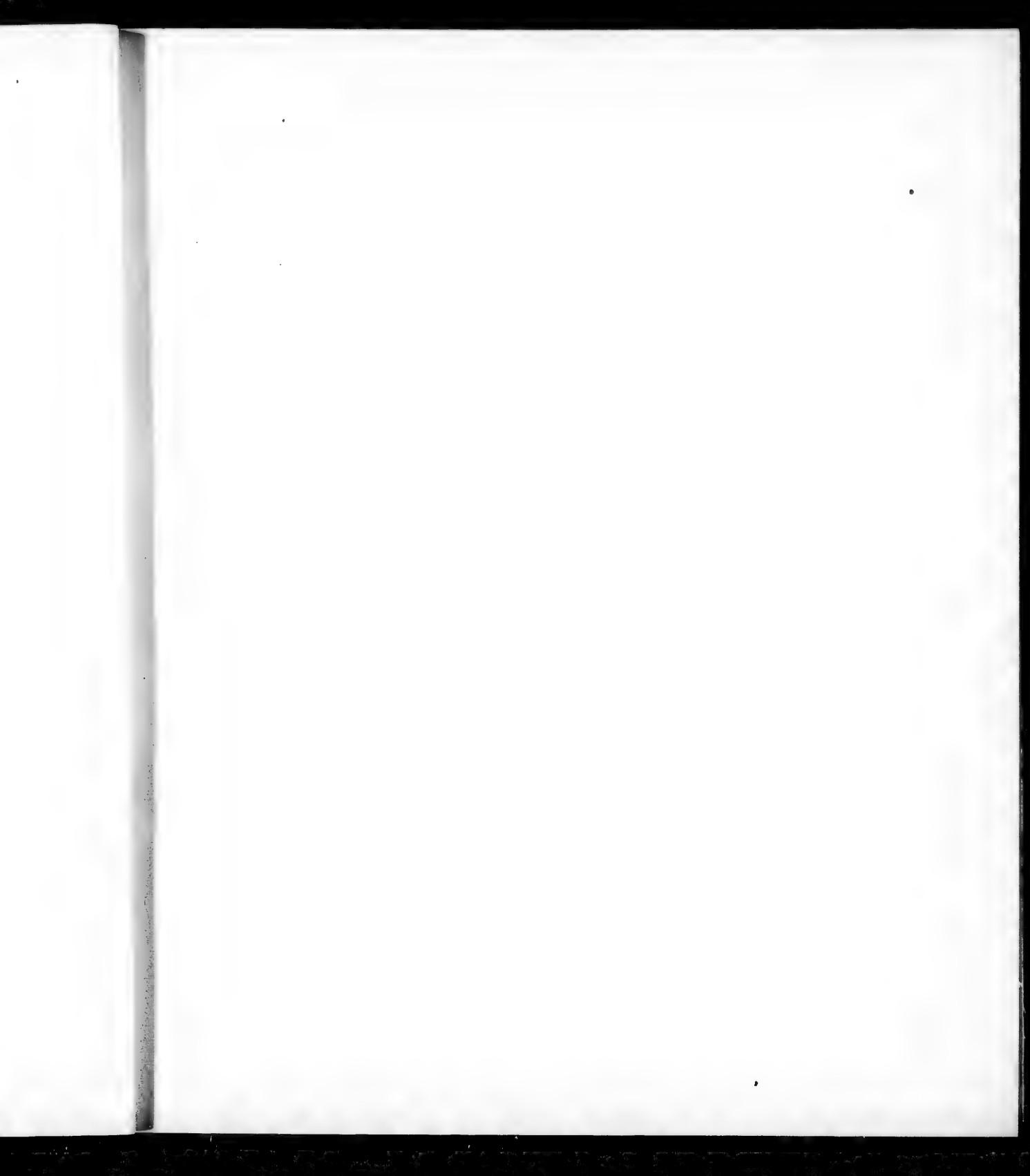
PHYSICAL MAP OF
WESTERN HEMISPHERE



Lowlands under 600 Feet
Highlands above 600 Feet

Warm Currents
Cold Currents





PHYSICAL MAP OF
EASTERN HEMISPHERE



Lowlands under 600 Feet

Highlands above 600 Feet

Warm Currents

Cold Currents

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PHYSICAL EASTERN HEMISPHERE.

I.—QUESTIONS ON THE MAP.

Continents.—What four continents are in the Eastern Hemisphere? Which is the largest? The next in size? The smallest? Which three are united into one great land-mass? What isthmus is between Asia and Africa? What ocean bounds Europe and Asia on the north? What ocean lies east of Asia? What three oceans border on Australia? What three continents border on the Indian Ocean? What ocean lies west of Europe and Africa?

Islands.—What two groups of islands are east of Asia? What archipelago southeast? What four great islands in the Malaysian Archipelago? What island north of Australia? South? Southeast of Africa? Southwest? What group west of Europe? What island northwest? What islands in the Arctic Ocean? What islands west of Africa? Northwest? What island south of Hindostan? What lands in the Antarctic Ocean?

Peninsulas.—What peninsula is in the northeastern part of Asia? In the eastern part? Southeastern? Southern? In the southern part of Indo-China? What peninsula is in the southwestern part of Europe? In the northern part?

Capes.—What cape is at the northern point of Europe? At the northern point of Asia? At the southern point of the Malay Peninsula? At the southern point of Hindostan? At the eastern point of Africa? At the southern point? The western point? The northern point?

Mountains.—What mountains are in the southern part of Europe? Between Europe and Asia? In the southern part of Asia? For what are the Himalaya Mountains remarkable? (*They are the highest in the world.*) How high is the highest peak? (*About 5½ miles.*) What mountains are near the centre of Asia? In the eastern part of Africa? In the western part? In the northwestern? What archipelago contains many volcanoes?

Plains, Plateaus, and Deserts.—What is the chief plain in Europe? What plain is in the north of Asia? What plain south of the Arctic Plain? What plain in Eastern Asia? In Southern Asia? What plateau north of the Himalaya Mountains? South of the Altai? What plateau in the western part of Asia? What plateau southwest of the Plateau of Iran? What other peninsula of Asia contains a plateau? Which continent is nearly covered by plateaus? What desert is in the plateau of Mongolia? In what part of Africa is the great desert of Sahara? For what is it remarkable? (*It is the largest desert in the world.*) In what other part of Africa is there a desert?

Seas, Gulfs, and Bays.—What sea is west of Kamtchatka? Of the Japan Islands? Of Corea? Of the Philippine Islands? In the Malaysian Archipelago? West of Hindostan? Of Arabia? Between Africa and Europe? East of the British Islands? What inland sea is northeast of the Mediterranean? East of the North Sea? What gulf west of Africa? East of Arabia? What bay east of Hindostan? West of Europe?

Straits.—What strait between Java and Sumatra? Between Tasmania and Australia? Between Australia and New Guinea? At the entrance of the Mediterranean Sea? At the entrance of the Red Sea? What channel between Madagascar and Africa? Between England and France?

Rivers.—What three rivers of Asia flow into the Arctic Ocean? What three rivers rise in Eastern Asia? What river flows into the China Sea? The Bay of Bengal? The Arabian Sea? What river of Africa flows into the Gulf of Guinea? The Mediterranean Sea? From what lakes in Africa? What river of Europe flows into the Caspian Sea?

Lakes.—What lakes in Africa are near the equator? What two lakes in Western Asia are called seas? What lake is in Australia?

Ocean Currents.—What current flows westward through the Indian Ocean? What current southwest of Africa? Northwest of Europe?

Zones. What circle crosses the northern part of Asia? What circle crosses the desert of Sahara? What continents does it cross? What great circle crosses Borneo? What continent does it cross? What circle crosses Australia? What other continent does it cross? What circle bounds the South Frigid Zone? What lands does it cross? In what zone is Sumatra? Nova Zembla? The British Islands? Cape of Good Hope? The Mediterranean Sea? In what zones is Africa? Asia? Europe? Australia?

Through what waters, and past what capes and islands would you sail in going from England to the Cape of Good Hope? From the Cape of Good Hope to Suez? From Suez to Ceylon? From Ceylon to Tasmania? From Tasmania to Japan?

II.—REVIEW EXERCISES.

Continents.—How bounded?

Europe? Asia? Africa? Australia?

Islands.—In what direction from the nearest land? By what waters surrounded?

Japan Islands? Malaysian Archipelago? Philippine Islands? Java? Celebes? Sumatra? Borneo? New Guinea? Tasmania? Madagascar? Ceylon? British Islands? Iceland? Spitzbergen? Nova Zembla? Madeira Islands? Canary Islands? St. Helena?

Peninsulas.—From what part of the continent does it project? Into what water, or between what waters?

Kamtchatka? Corea? Indo-China? Malaysian? Scandinavian? Hindostan? Spanish?

Capes.—From what land does it project? From what part of it? Into what body of water?

North? Northeast? Romania? Comorin? Bon? Good Hope? Guardafui? Verde?

Mountains.—In what part of the continent are they? In what direction do they extend?

Alps? Ural? Altai? Himalaya? Moon? Atlas? Kong?

Plains, Plateaus, and Deserts.—Where situated?

Great plain of Europe? The Steppes? Arctic Plains? Siberian Plains? Plain of China? Plain of the Ganges? Australian Plains? Plateau of Mongolia? Plateau of Tibet? Plateau of Iran? Plateau of Arabia? Desert of Gobi? Arabian Desert? Sahara Desert?

Oceans.—Of what continents does it wash the shores? Or, around what pole is it?

Arctic? Pacific? Antarctic? Atlantic? Indian?

Seas, Gulfs, and Bays.—What coasts does it indent or wash? Of what ocean or other body of water is it an arm?

Okhotsk? Japan? Yellow? China? Java? Bengal? Arabian? Red? Persian? Guinea? Mediterranean? Black? Biscay? North? Baltic?

Straits.—Between what lands? What waters does it connect?

Sunda? Bass? Torres? Gibraltar? Bab el Mandeb? Mozambique?

Rivers.—In what continent does it rise? In what part of it? In what mountains? In what direction does it flow? Into what water?

Obi? Yenisei? Lena? Amoor? Hoang Ho? Yang tse Kiang? Ganges? Cambodia? Indus? Niger? Nile? Volga? Danube?

Lakes.—Where situated? What outlet has it?

Albert Nyanza? Victoria Nyanza? Caspian Sea? Aral Sea? Eyre?

Ocean Currents.—In what ocean? In what part of it? In what direction does it flow?

Equatorial Current? South Atlantic Current? Gulf Stream?

THE ATMOSPHERE.

The **Atmosphere** is the vast ocean of air surrounding the Earth, and in the lower stratum of which we live.

The **Height** of the Atmosphere is supposed to extend about fifty miles above the surface of the Earth, so that in comparison the atmosphere is only like a thin covering not more than one-hundredth part the radius (half the diameter) of the Earth.

The Air is a highly elastic body, the lower layers of which become more dense, according to the amount of pressure upon them from the upper Atmosphere.

The weight of the Atmosphere is measured by the **Barometer**, an instrument with a slender glass tube containing a column of mercury thirty inches in height, rising from a closed bowl at the bottom. According to the height of the Atmosphere above the sea level, its weight decreases and the mercury falls in proportion, until at the height of fifty miles the mercury is supposed to sink entirely into the bowl.

There is also another kind of Barometer which may be made small enough to carry in the pocket, called the **Aneroid**. This consists of an air-tight box formed of thin metallic plates, the compression of which is resisted by a metallic spring. By a system of levers connected with the box and the spring, motion is given to an index which registers the variation of the atmospheric pressure.

The **Greatest Height** attained by any observer was that reached in Glaisher's balloon, nearly seven miles above the Earth. In the Mountains of Tibet a height was reached of over four miles. In both cases the suffering was very great, as the extreme rarity or lightness of the air produced intense cold and great difficulty in breathing.

The Atmosphere derives but little heat directly from the Sun's rays. It absorbs the heat and vapors caused by the action of the Sun upon both land and water; and through the medium of the winds carries moisture and fertilizing rains from the sea to the parched lands.

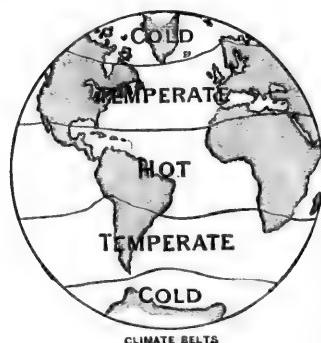
Air is necessary to the existence of all forms of organic life, and it is in the lower Atmosphere that the highest forms of **Vegetable and Animal Life**, including man himself, find the proportions of oxygen, heat and moisture requisite for their vitality and development.

Nearly all the moisture and all animal and vegetable life are found within three and a half miles above the level of the sea. Beyond this elevation the thinness and dryness of the Atmosphere, and the intense cold, even in tropical countries, render plant life, and consequently animal life, impossible.

CLIMATE.

The **Climate** of a country is the general condition of the atmosphere at the different seasons in regard to heat, moisture, and health.

Climate depends upon **Latitude** or distance from the Equator; upon the **Elevation** of the land above the sea-level; upon the **Distance** from



the sea, upon the prevailing **Winds** and **Ocean Currents**, and upon the amount of **Moisture** in the air.

The zones marked on maps and globes give only a general idea of the climate or temperature. The actual belts of climate are more accurately shown on the accompanying diagram. The lines crossing the map indicate that the places crossed by each have the same average amount of heat in the course of a year. They are called **Isothermal Lines**, or *equal-heat lines*. If the degree of heat depended only on the latitude of the place, the tropics and polar circles would correctly mark the boundaries of climate; but since other conditions have to be taken into account, the lines marking the actual belts of climate vary in direction.

I.—HEAT.

The heat throughout the year is greatest at or near the Equator, and diminishes gradually towards the poles. Climate is therefore to a great extent dependent upon the latitude of the place.

The Frigid Zones have an intensely cold climate, while that of the Torrid Zone is intensely hot.

The **Height** of the land affects the temperature, as some high plateaus even in the Torrid Zone have a cool temperature; and in every zone there are high mountains, the tops of which are always covered with snow.

The lower limit of perpetual snow is called the **Snow-line**, and this becomes gradually lower in proportion to the distance from the Equator.

On an average, an increase of 330 feet in altitude diminishes the temperature 1° (Fahrenheit), or 3° for every 1000 feet; hence, even at the Equator, by ascending to the height of 16,000 feet above the level of the sea, the snow-line is reached.

The **Nearness** or **Remoteness** of a place from the sea, or from any large body of water, affects the temperature both in regard to heat and moisture.

The heat absorbed by the land does not descend to any great depth below the surface, and is given off rapidly; while that absorbed by the water influences it to a great depth, and is given off slowly. In summer the air over the sea is cooler than that over the land, because the water gives off its heat more slowly than the land. In winter, the reverse is the case, the air over the ocean being warmer than that over the land, because the latter has given out its heat, while the ocean has still retained a large portion of it.

The atmosphere of the land near to the sea partakes of the temperature of that of the latter, whether affected by warm or by cold currents. Thus the temperature of Winnipeg is warmer in summer and colder in winter than that of Halifax, although the former is nearly 400 miles further north.

The **Length of the Day** affects the temperature, inasmuch as more heat is communicated in a long day than is carried off in the short succeeding night.

In the Polar Regions, notwithstanding the obliquity of the Sun's rays, the heat during the short summer may equal or even exceed that of the Tropics, so that a summer day in Labrador may be as warm as one under the Equator. In the latter the temperature is nearly uniform throughout the year, while in the former there are only a few days of extreme heat.

II.—WINDS.

The **Prevailing Winds** at a given place affect the temperature, those blowing from the Equator being warm, and those from the polar regions cold.

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Winds are Currents of Air, and bear the same relation to the Atmosphere as a current does to the Ocean. They are mainly occasioned by differences in temperature, and by the amount of vapor held in suspension by the air.

In the vicinity of the Equator, where the average annual temperature is highest, the Atmosphere is at its least density; and this density gradually increases, with the diminishing temperature, from this region to the polar latitudes.

Heat causes the air to expand and thereby become lighter. By this expansion the light air rises, and that which is colder and denser rushes in to supply its place. This motion produces two currents of air, which blow from the polar regions towards the Equator. These currents become what is called the **Trade Winds.** Owing to the velocity of the revolution of the Earth on its axis, these winds take a westerly direction as they approach the Equator.

The **Trade Winds** extend between the parallels of 30° North and 30° South. They carry immense quantities of vapor from the Atlantic, Pacific, and Indian Oceans, and are invaluable to the mariner, as their direction and force can always be depended upon.

The cold currents of air, as they become heated in the Torrid Zone, rise and form counter currents flowing towards each Pole, to fill the spaces left vacant by the polar currents. They gradually cool and settle beyond the latitude of 30° N. or S., where they form the **Return Trade Winds**, blowing towards the North-east in the Northern Hemisphere, and towards the Southeast in the Southern Hemisphere.

The Trade Winds and the Return Trade Winds are similar to the Ocean Currents both in cause and general direction.

Winds may be grouped as **Constant, Periodical, or Variable.** To the first belong the Trade Winds of tropical latitudes; to the second belong the daily sea and land breezes, and the monsoons, occurring chiefly in tropical regions; and to the last belong the temporary or local winds occurring in temperate or high latitudes.

When a warm ocean wind strikes the side of a high mountain chain, it passes up the slope, growing colder, and gradually losing most of its moisture in the form of rain or snow as it ascends; it then passes over the range as a dry, cold wind.

The warm and moist Return Trade Winds of the Atlantic blow upon Western Europe, and the warm waters of the Gulf Stream wash its shores.

In the same latitude the shores of Greenland and Labrador are swept by the cold winds from the polar regions, and are washed by the icy waters of the Arctic currents. Hence, Western Europe has a mild climate, moist on the sea shore, while Greenland and Labrador are frozen wastes scarcely inhabited.

The British Isles are nearly in the same latitude as Labrador, and owe their mild climate to the influence of the warm Return Trade Winds and the Gulf Stream.

III.—MOISTURE.

The air always contains more or less **Vapor**, which we call moisture. The warmer the air is, the more moisture it contains.

If, when fully charged with moisture, the air is suddenly acted upon by cold winds, part of the vapor is thrown off. The **precipitation**, as it is called, may be in minute particles floating in the air, forming **fog** or **mist**, or in drops forming **rain**. The vapor, before condensing into drops, may be frozen in the upper air into **snow**; or the drops, after being formed, may be frozen into **hail**.

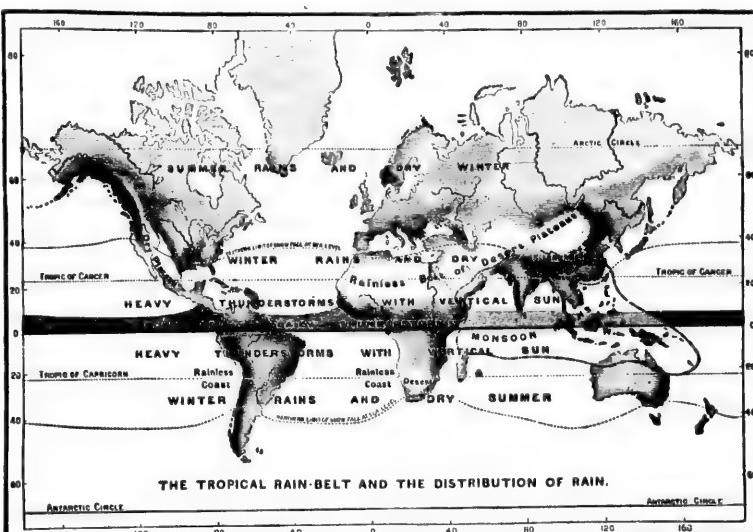
The **Rainfall** of a country is the quantity of water that falls upon it as rain or snow.

The quantity of water that falls annually at any given place varies little in a succession of years; but the amount of rainfall varies greatly according to the position of the place, being greatest in the tropics and diminishing towards the poles. The greater the distance from the sea, the less the rainfall.

In the Torrid Zone the average annual rainfall is about 100 inches, but in some places it is much greater. In the Temperate Zones it is from 35 to 40 inches. In the Frigid Zones it is much less. In Ontario, the average rainfall, including melted snow, is about 32 inches: at Toronto it is about 35 inches.

The **Tropical Rain-belt** is a broad, movable belt of daily rains extending round the world. It is about 1,000 miles wide from north to south.

This zone of daily rains moves with the sun, and as the places where the sun's rays fall vertically have the greatest heat, the evaporation there is consequently greatest, and the rains most frequent. In those regions which are open to the Trade Winds a heavy thunderstorm begins early in the afternoon, and continues till near sunset; the sky then becomes cloudless till the next day about the same hour. After some weeks, the sun being no longer vertical, the rains become less frequent, and at last cease for months, until the sun again becomes vertical.



In the Torrid Zone the temperature varies but little all the year round, and the only change of season is from the wet period while in the zone of daily rains, to the dry period when the Sun has passed the zenith. Places near the equator have therefore two rainy and two dry seasons; while some parts of the Torrid Zone have only one rainy, and one dry season, the latter of which is much longer than the former. When the Sun is north of the Equator it is the rainy season in the northern half of the Torrid Zone, and the dry season in the southern half, and the reverse when the Sun is south of the Equator.

A great **Belt of Deserts** stretches across the Old World from the Atlantic to the Pacific Oceans. The existence of these deserts is owing to the absence of rain-bearing winds.

The rains of the Torrid Zone are called *periodical*, because they occur at regular periods; those of the Temperate Zones, which are more irregular, are called *variable*.

The study of the weather has now been reduced to a science, called **Meteorology**. Observations of the temperature, the moisture and density of the air, the velocity and direction of the wind, and some minor particulars, are taken simultaneously at many points in this country, in the United States, and in Europe. The reports of these observations are telegraphed to certain centres in different countries. In Canada they are sent to Toronto, and from them weather charts are constructed. From these charts the weather probabilities for the ensuing twenty-four hours are forecast and telegraphed daily over the country. These *Probabilities* are useful to the farmer as guides in his operations; while the cautionary signals of approaching storms, displayed at the various ports on the lakes and on the seaboard, are of still greater service to the sailor. Notice of advancing storms has frequently been telegraphed from America to Europe, and has saved much disaster to shipping.

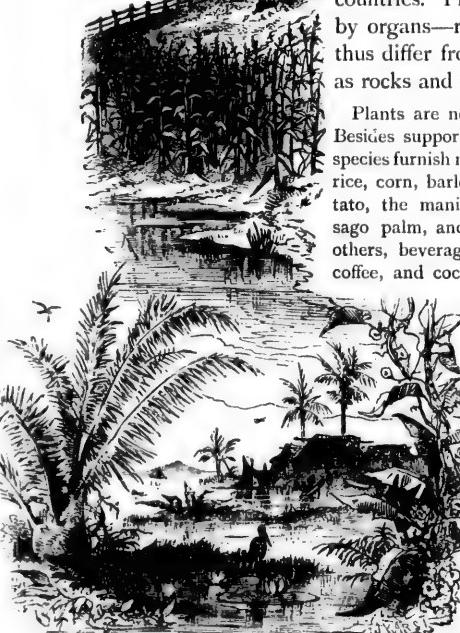
ANALYTICAL REVIEW.

I.—Heat.

- The Atmosphere.**
- Define.
Height.
Density.
Barometer { Mercurial
Aneroid.
Height attained.
Heat and vapor: how useful?
Why necessary?
Organic life: where found.
- Climate.**
- Define.
Causes of variation.
Isothermal lines.
How dependent on latitude.
Frigid Zones.
Torrid Zone.
How dependent on the height of the land.
Snow-line.
Proportion of heat to altitude.
Effect of the proximity of the sea.
Difference between sea and land heat.
Atmosphere of sea and land.
Influence of the sea on the temperature of the land.
Effect of the length of the day.
Summer heat in Polar Regions.

II.—Winds.

- TRADE WINDS**
- How produced.
Direction.
Extent.
Usefulness.



III.—Moisture.

- | | |
|--|---|
| RETURN TRADE WINDS . . . | How produced.
Where occurring.
Direction. |
| Compare Trade Winds and Ocean Currents.
Variety of winds.
<i>Constant</i> : give example.
<i>Periodical</i> : give example.
<i>Variable</i> : where occurring
Effect of a mountain chain.
Effect on climate; compare | |
| Describe.
Precipitation. | |
| RAINFALL . . . | Describe.
Annual quantity.
Variation of quantity. |
| TROPICAL RAIN-BELT . . . | Define.
Extent.
Describe. |
| Seasons in Torrid Zone.
Belt of Deserts.
Periodical Rains.
Variable Rains. | |
| WEATHER OBSERVATIONS. | Meteorology.
How observations are made.
How reported.
Use. |

PLANTS.

Plants (flora) include the trees, shrubs, and vegetables of different countries. Plants have life maintained by organs—roots, stems, leaves—and thus differ from *inorganic* matter such as rocks and metals.

Plants are necessary to man's existence. Besides supporting the lower animals, many species furnish mankind with food; as, wheat, rice, corn, barley, and other cereals, the potato, the manioc, the breadfruit tree and sago palm, and the various fruits. From others, beverages are made; such as tea, coffee, and cocoa, from the latter of which chocolate is prepared.

A third class supplies fibres, from which various fabrics for clothing and other useful purposes are made; as cotton, flax, hemp, and jute. Others, furnish drugs, gums, oils, dyes, spices, and wood for building and manufacturing purposes.

Of more than 200,000 species of plants supposed to exist about 4000 are cultivated for their products.

Iow produced.
Where occurring.
Direction.

Winds and Ocean

Sample.
example.
occurring.
chain
; compare

Describe.
Annual quantity.
Variation of quantity.

Define.
Extent.
Describe.

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Meteorology.
How observations are made.
How reported.
Use.

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re than 200,000 species
is supposed to exist
oo are cultivated for
products.

Heat and moisture are essential to plant life, and as the Torrid Zone has most heat and moisture, it has also the most luxuriant vegetation.

The vegetation of different regions depends to some extent on the soil and other conditions, but mainly on the climate.

Tropical regions are characterized by enormous creeping plants, palms, spice-trees, the bamboo, the India-rubber tree, the breadfruit of Oceania, the banyan of the East Indies, the orchids (*or'kids*), and tree-ferns with their long branchless trunks crowned with immense tufts of leaves.

The cactus, indigo, cotton, coffee, sugar-cane, rice, millet, and tropical fruits, flourish in the Torrid Zone and in the regions adjacent to it.

As we leave the tropics, the rich distinctive forest vegetation of the Torrid Zone, green throughout the year, gradually gives place to a less luxuriant growth. Soon, deciduous trees (those that shed their leaves in autumn) prevail.

Passing from the Torrid to the Temperate Zones we find tropical fruits at first growing side by side with the grape and olive, but as we reach cooler regions the apple, plum, peach, and cherry take the place of the former. Cotton and sugar-cane are cultivated, but gradually give place to tea, tobacco, hemp, and flax.

Rice, maize, wheat, buckwheat, rye, oats, barley, is the general order in which grains can be cultivated, as we proceed towards higher latitudes. The potato has a wide range in which it is cultivated, extending into the colder parts of the temperate zones. Here the oak, beech, maple, ash, and elm, mingle with the pine, hemlock, cedar (arbor vite), and spruce. At last, few forest-trees are found save the hardier pines, the trailing cedar, the birch, fir, and willow.

Mosses and lichens mark the extreme regions of vegetable life.

As elevation above the sea-level modifies heat, so it affects vegetation. If we ascend a mountain in the tropics to a height of 16,000 feet, we meet with a succession of climates and plant-belts similar to those met with in going from the Equator to the Arctic Regions. The engraving opposite illustrates the variety of vegetation in different latitudes.

ANIMALS.

Animals (fauna) have organs, such as heart, stomach, lungs or gills, upon which life depends; but it is a higher kind of life than that of plants, as it is accompanied with sensation and the power of voluntary motion. Some animals feed directly on plants; others prey on weaker animals which feed on plants or their products; all depend ultimately on the vegetable kingdom for their support. In tropical regions, where vegetation is most luxuriant, animal life is most abundant.

Many animals are useful in saving labor by carrying or drawing loads, and by doing a variety of work. The flesh of others is used for food, and as such is particularly valuable in cold regions, where animal food is more necessary to man's existence than in warmer climates.

The wool of the sheep and alpaca is woven into cloth. Silk is made of the thread of the silkworm. The furs of some animals are worn as clothing. The hides of others are tanned, and converted into leather. Besides these, animal life supplies a great variety of other products, such as milk, and the butter and cheese made from it, oil, ivory, bone, feathers, and hair.

Animals, like plants, are specially adapted to certain conditions of climate and food, which regulate their distribution over the earth's surface.

As we reach the several Grand Divisions of the Earth, the characteristic animals will be shown. As a rule, the hot regions are the abode of the largest, strongest, and fiercest animals, the most venomous serpents, and the brightest-hued birds and insects. The largest water-animals—the whale, walrus, and seal—frequent the colder seas. The domestic animals thrive best in the temperate zones.

MAN.

Man stands at the head of the animal kingdom. Being able to adapt himself to extremes of climate, he is not, like the lower animals, limited to particular regions. He is more or less affected, however, by his surroundings, and attains the highest development in temperate climates. Within the tropics, his wants are so easily supplied that he lacks stimulus to exertion; while, in the polar regions, his life is spent in a constant struggle for food and clothing.



1. The **Caucasian**.—So called from the supposition that they came originally from the Caucasus, between the Black and the Caspian Seas. This race is noted for physical beauty and mental development. The characteristics are: fair complexion, in hot regions, swarthy; forehead, full; hair, soft; beard, heavy.

This race is distributed through south-western Asia, nearly all of Europe, a great part of America, the coasts of Australia, and in various parts of northern and southern Africa. Number: about 600 millions.

The Caucasian is the most intellectual and civilized race, and embraces the leading nations of the earth.

2. The **Mongolian**.—The characteristics are: complexion, yellowish; face, flat; cheek-bones, prominent; eyes, narrow and obliquely set; hair, coarse, straight, and black. This race is found in most parts of Asia, in Arctic America, and in north-eastern Europe. Number: about 550 millions. The Chinese and Japanese are types of this race.

3. The **Ethiopian, or Negro**.—The characteristics are: black

or very dark complexion; forehead, receding; nose, flat; lips, thick; jawbones, prominent; hair, black and woolly; beard, thin. Abode; the whole of Africa except the parts previously mentioned. Number; about 180 millions.

4. The **Malay**.—The characteristics are: complexion, different shades of brown; head, narrow; forehead, low and broad; mouth, large; hair and beard, abundant, black and curly. The race is distributed throughout the Malay Peninsula in Asia, and the islands of Oceania. Number; about 60 millions.

5. The **American**.—The characteristics are: complexion, copper-colored; face, broad with strongly marked features; forehead, low; cheek-bones, high; hair, straight, coarse, and black; beard, scanty. To this race belong the native tribes of North and South America, except those of the Arctic coasts. Number; about 10 millions.

6. The **Australian**.—The characteristics are: color, livid, grayish black; hair, thick and waving, or bushy; beard, abundant; and eyes, very deep set, black and piercing. This race inhabits Australia, and has a remote connection with the Malays, from proximity to New Guinea and the islands of the Pacific.

MINERALS.

Minerals consist of inorganic matter; such as rocks, earths, and metals. As they have no life, their distribution is independent of climate. The most valuable minerals are the following:—

Metals, forty-nine in number, marked by peculiar lustre.

The **Precious Metals** are gold and silver. They are often associated with each other, and occur chiefly in the rocks of mountain-slopes. Gold is also found in the sandy beds of rivers, to which it has been washed down from the rocks on higher levels, which have crumbled away, as in British Columbia.

Of the metals, **iron** is the most widely distributed. Other important metals are **Lead**, **Copper**, **Tin**, **Zinc**, **Platinum**, and **Quicksilver** or **Mercury** (the only liquid metal). With the exception of platinum, they are usually found in union with other substances, in which condition they are called **Ores**.

Precious Stones: the diamond, ruby, emerald, sapphire, opal, and many others. The diamond is the most valuable of gems and the hardest of known substances. It is generally found in gravelly or sandy deposits, from which it is obtained by washing, as in Brazil, India, and Cape of Good Hope.

Coal; mineral fuel formed from the vegetable matter of a by-gone age. **Anthracite**, or hard coal, is dense and heavy; **Bituminous**, or soft coal, is lighter and burns with a flame. Coal is very widely distributed, the beds of Great Britain and the United States being especially large and rich; in Canada, the coal-beds of Nova Scotia in the east, Vancouver Island in the west, and the Districts of Saskatchewan and Assiniboina in the north-west, are also valuable. It is all-important in the useful arts—for the smelting of iron, the generation of steam to move machinery, and for other purposes.

Petroleum, or rock-oil; generally obtained by boring into the earth, as in south-west Ontario, but sometimes found issuing from the surface in springs. **Kerosene**, used for burning in lamps and for oiling machinery, is made from petroleum.

Building-stones; such as limestone, granite, and sand-stone.

Clay, used for making bricks, drain-pipes, crockery, vases, and other useful or ornamental articles. **Kaolin**, from which China-ware is manufactured, is a fine kind of white clay.

ANALYTICAL REVIEW.

Plants.	What they include.
	Organs.
	How they differ from inorganic matter.
	Use.
	Food: examples.
	Beverages: examples.
	Fabrics: examples.
	Other varieties.
	Number of species.
	How many cultivated.
	Essentials to plant life.
	Vegetation of Torrid Zone.
	On what conditions is vegetation dependent?
	Characteristics of tropical regions.
	Products of tropical regions.
	Deciduous trees.
	Products of Temperate Zones.
	Order of grains.
	Trees of Temperate Zones.
	Limit of vegetative life.
	Height of land: effect.
Animals.	Organism.
	Means of subsistence.
	Where most numerous.
USE	Labor.
	Food.
	Clothing.
	Other products.
	How distributed.
PECULIARITIES	Tropical Regions.
	Arctic Regions.
	Temperate Zones.
Attributes	Development.
	(Temperate Zones. Tropical Countries. (Arctic Regions.
Man.	Population.
	Races.
	Caucasian.
	Mongolian.
	Negro.
	Malay.
	American.
	Australian.
Minerals.	Formation.
	Distribution.
METALS	Number.
	Peculiarity.
	Precious metals; where found?
	Other metals.
	How found.
PRECIOUS STONES ...	Names of some.
	Diamonds.
	Where found?
COAL	Anthracite.
	Bituminous.
	Where found?
	Importance.
	Petroleum.
	Kerosene.
	Building-stones.
	Clay.

rockery, vases,
tin, from which
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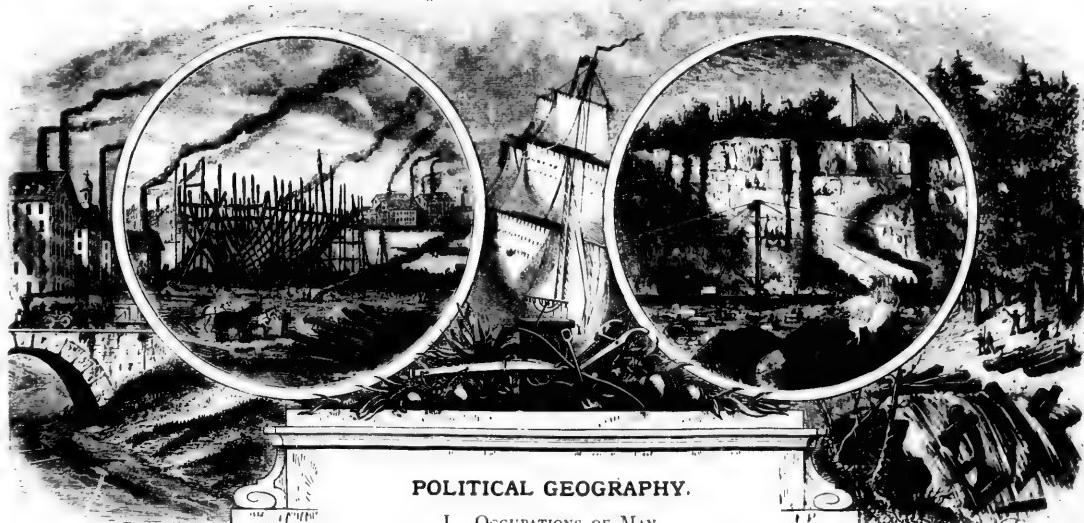
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POLITICAL GEOGRAPHY.

I.—OCCUPATIONS OF MAN.

The Chief Occupations, or industrial pursuits, by means of which men provide for their wants, are:—

Agriculture, or farming. Connected with this is *Stock-raising*, or the rearing of horses, mules, cattle, sheep, and hogs. *Dairying* is that branch of farming which has in view the production of milk, butter, and cheese.

Manufacturing, or the making of useful articles from raw materials by hand or by machinery, as the manufactures of wood, iron, cotton, wool, and leather.

Commerce, which consists in the exchange, or purchase and sale, of commodities.

Commerce is called *Domestic*, if it is carried on between parts of the same country; *Foreign*, if carried on between different countries. Produce or goods brought into a country are called *Imports*; those sent out are *Exports*. *Transportation* is the business of carrying commodities (called *Freight*) from one place to another, by road, by rail, or by water.

Mining, or digging into the earth for coal, metallic ores, or precious stones. Taking stone from its bed is called *Quarrying*.

Lumbering, which consists in cutting down trees in forests and taking the logs to market.

Fishing, Hunting, and Trapping.

The chief fisheries are those of the whale, seal, cod, herring, salmon, and mackerel. The capture of fur-bearing animals is the special object of the trapper.

II.—SOCIAL CONDITION.

Four grades of social condition are recognized:—

1. Enterprising and industrious nations, capable of improving their condition in life, provided with educational facilities, and proficient in the arts and sciences, are said to be **Civilized**.

2. Nations less advanced in these respects, yet having a written language, some regard for education, and not without skill in agriculture and manufactures, are distinguished as **Half-civilized**.

3. Nations whose inhabitants have no settled abode, are without schools or literature, that pay little attention to agriculture or manufactures, and live mainly on the products of their herds and flocks, are known as **Barbarous**.

4. Tribes, indolent, degraded, fierce and cruel, ignorant of laws, and subsisting on forest products, or on what they can get by hunting and fishing, are classed as **Savage**.

III.—RELIGIONS.

All nations, except perhaps the lowest savages, have some **Religion**—that is, some belief in a Higher Power, and a system of worship. The different religious systems are embraced under four heads:—

1. The **Christian**, which teaches a belief in one God, the Bible as His revealed word, and Jesus Christ (whence the name *Christian*) as the Son of God and the promised Messiah. This faith prevails among civilized nations, and includes about 395,000,000 followers.

2. The **Jewish**, which inculcates a belief in one God, and the Old Testament alone as His word, but rejects Christ. There are about 7,000,000 Jews, scattered for the most part among civilized nations.

3. The **Mohammedan**, whose followers acknowledge one God, and Moses and Christ as prophets, but believe in Mohammed as the last and greatest prophet. For the Bible it substitutes the Koran, containing the revelations which Mohammed claimed to have received from Heaven. This faith has about 232,000,000 followers, including many half-civilized nations in Asia and northern Africa.

4. The **Pagan**.—This class appears in different forms, all of which worship false gods—often idols of wood and stone—in place of the God of the Bible. More than half the inhabitants of the earth are Pagans. The most numerous class is the Buddhist (*Buddhist*).

The Christian faith embraces about 203,000,000 Roman Catholics, 110,000,000 Protestants, and 82,000,000 followers of the Greek Church.—Mohammed established his religion in Arabia about 625 A.D., whence it spread, chiefly at first by warfare over the neighboring countries.—*Brahmanism* is that form of religion or mythology followed by most of the inhabitants of India, and *Buddhism*, another form of the same, by most of the Mongolian race. These number about 500,000,000 followers, or more than one-third of the whole human race.

IV.—GOVERNMENT.

Government is that system according to which a country is ruled. Savage and barbarous tribes have either no government at all, or are ruled by chiefs whose will is law. Among civilized and half-civilized nations the prevailing forms of government are those of a **Monarchy** or of a **Republic**.

A **Monarchy** is a country in which the supreme ruling power is held by one person for life.

Monarchs are called *Hereditary*, when the power descends from father to son; *Elective*, when the monarch is chosen by some body of electors. There are also *Absolute* monarchies, or *Despotisms*, in which the monarch's power is unrestrained,—and *Limited* or *Constitutional* monarchies, in which his power is restricted by a constitution or by laws. In the Eastern Continents, the governments are chiefly monarchies.

Monarchs and their rulers have certain specific names. A *Kingdom* is a monarchy under a King (or, if the sovereign be a woman, a Queen). An *Empire* is a monarchy (usually large, or composed of different states) under an Emperor or Empress. The Emperor of Russia is called the *Czar*. A Prince is the real or nominal head of a *Principality*; a Duke, of a *Duchy*; a Grand Duke, of a *Grand Duchy*; an Elector, of an *Electorate*.

A **Republic** is a country in which the laws are not only made by representatives of the people as in a limited monarchy, but are administered by officers elected by the people. The chief officer of a republic is a President.

Most of the countries of the Western Continent are republics.

V.—DIVISIONS.

The **Divisions** of countries are variously known as Provinces, States, Districts, Counties, Shires, Townships, and Departments.

A **Village** is a small collection of inhabited houses. A **Town** is a larger collection of houses, and in which a regular market is usually held.

In Ontario, a village or a town may become incorporated when they contain 750 and 2,000 inhabitants respectively, but they do not receive the same privileges as a city.

A **City** is a large town which is incorporated; that is, invested by law with certain rights and privileges. A city is usually governed by a Mayor and Aldermen.

A **Seaport** is a place near the sea, having a harbor for the accommodation of vessels.

The **Capital** of a country is its seat of government, the place where the laws are made, and where the chief officer of the nation resides. The **Metropolis** is the largest city.

The **Growth** of villages, towns, and cities results from their becoming central positions where people collect in small areas to carry on their occupations, whether in commerce or manufactures. **Commercial cities** are generally those having a good harbor on a sea-coast, lake or river, at which goods can be readily received and distributed. **Manufacturing towns** or **cities** are generally those where rapids or falls in the course of a stream supply extensive water-power, or near which rich mines of coal, iron, or other minerals are found.

ANALYTICAL REVIEW.

	Name. Agriculture. Stock-raising. Dairying. Manufacturing.	Domestic. Foreign. Imports. Exports. Freight.
I. Occupations of Man.	COMMERCE	
	Mining. Quarrying. Lumbering. Fishing, Hunting, and Trapping. Chief Fisheries.	Christian. Jewish. Mohammedan. Pagan.
II. Social Condition.	Civilized; define. Half-civilized; define. Barbarous; define. Savage; define. Define.	
	DIVISIONS	Christian; how divided? Mohammedan; origin. Brahmanism. Buddhism. Define. Prevailing forms. Where general?
III. Religions.	MONARCHY	
	REPUBLIC	Define. Hereditary. Elective. Absolute. Limited. Where chiefly existing. Various names. Names of Rulers. Define. Chief Officer. Where chiefly ex-
IV. Government.		
V. Divisions.		

GRAND DIVISIONS OF THE WORLD.—REFERENCE TABLE.

	AREA IN SQ. MILES.	POPULATION.	PERSONS TO A SQ. MILE.	SIZE COMPARED WITH THE DOMINION OF CANADA.
North America				
South America				
Europe				
Asia				
Africa				
Oceania				
TOTAL				

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Domestic.
Foreign.
Imports.
Exports.
Freight.

Christian.
Jewish.
Mohammedan.
Pagan.

Define.
Hereditary.
Elective.
Absolute.
Limited.
Where chiefly ex-
isting.
Various names.
Names of Rulers.
Define
Chief Officer.
Where chiefly ex-

RENCE TABLE

SIZE COMPARED WITH
THE DOMINION OF
CANADA.



ANIMALS OF NORTH AMERICA.

In the centre picture we have a scene formerly common in unfequented regions of the Great West—Indians hunting the bison; a bison calf and an antelope are with the herd in front. In former times the bisons are said to have been so numerous as sometimes to dam the rivers when they crossed.

On the left of the centre picture appears the Rocky Mountain sheep, or big-horn. In the vignettes below may be seen the huge grizzly bear devouring its prey; the prairie-dog, especially abundant west of the Missouri River, with the burrowing owl and the rattlesnake, which share its sub-

terranean home; and the bald-headed eagle spreading dismay among a flock of wild turkeys. The turkey is a native of America.

On the right we have in succession the musk-ox, which roams in Arctic America to within 11° of the North Pole; the moose (the elk of Europe), with its enormous horns and long swinging trot, an inhabitant chiefly of the Canadian forests; the raccoon, and the ruffed grouse or partridge (also known as the pheasant). The puma (cougar or panther) ranges the continent from the Great Lakes almost to Cape Horn; it is represented as about to spring from an overhanging branch on the unsuspecting deer below. The seal frequents the Arctic waters. Fur-bearing animals, the marten, sable, etc., abound in the north.

PHYSICAL NORTH AMERICA.

I.—GENERAL DESCRIPTION.

North America forms the northern part of the western continent. It ranks third among the Grand Divisions in size, and fourth in population. Its extent is about 8,750,000 square miles, and its population about 72,000,000.

Its greatest **Width** (about 3,100 miles) is in the north. Thence it narrows down to fifty miles at the Isthmus of Panama, which connects it with South America. The **Length** from north to south is nearly 5,000 miles. It is more than twice as large as Europe, but less than half the size of Asia. The north-western extremity is only thirty-six miles distant from Asia, from which it is separated by Behring Strait. Greenland, and the northernmost islands of the Arctic Archipelago, approach nearer to the North Pole than any other known land does.

The **Coast-line** of North America is indented on the eastern side by many large arms of the ocean. Its length, including that of the islands, is about 30,000 miles.

The **Rivers** of the Central and Atlantic Plains are generally navigable for the greater part of their courses, and open up the interior of the country to commerce. The streams of the Great Basin in

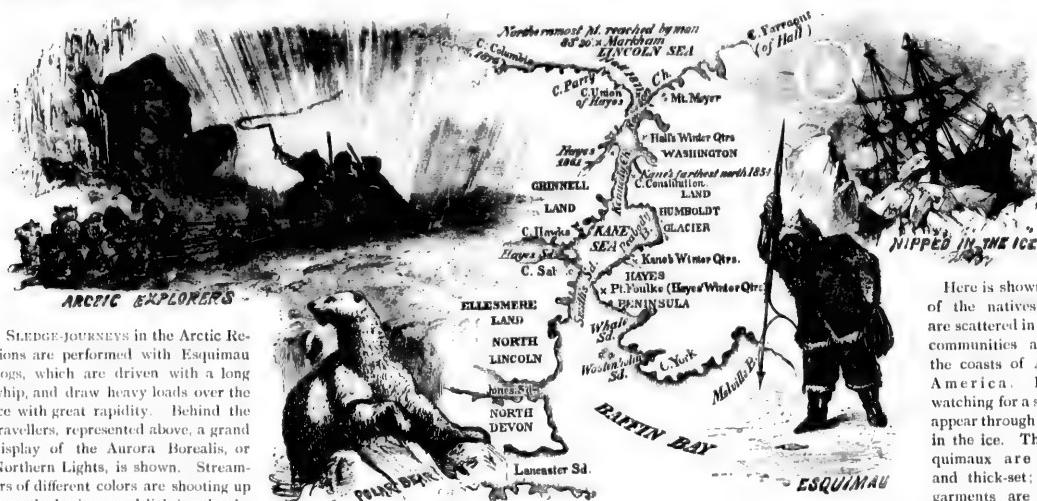
the Western Highland (*see map on the following page*) have no outlet to the ocean, but are either absorbed by the sands or flow into lakes also without outlet. The **Lakes** of North America are estimated to contain about one-third of all the fresh water on the globe.

When Columbus discovered the New World in 1492 the **Inhabitants** were of the American race. These were scattered throughout North America, some being savage and others more or less civilized. Their descendants now number about six millions, and are chiefly to be found in the west and north.

About four-fifths of the present population are of the Caucasian race, whose ancestors originally came from Europe, and first made permanent settlement in the country about three centuries ago. Their numbers are being constantly increased by emigration from the Old World. About seven and a-half millions of the population are negroes, mainly descended from Africans brought across the ocean as slaves. The Arctic Regions are sparsely inhabited by Esquimaux (*Eskimo*) tribes of the Mongolian race.

The **Natural Advantages** possessed by North America are:—its numerous valuable products (such as sugar, cotton, tobacco, and wheat); its minerals (gold, silver, coal, iron and copper); its position, lying in three zones, but chiefly in the temperate zone; its vast area of fertile soil; and its numerous navigable lakes and rivers and fine harbors.

ARCTIC REGIONS OF NORTH AMERICA.



SLEDGE-JOURNEYS in the Arctic Regions are performed with Esquimaux dogs, which are driven with a long whip, and draw heavy loads over the ice with great rapidity. Behind the travellers, represented above, a grand display of the Aurora Borealis, or Northern Lights, is shown. Streamers of different colors are shooting up from the horizon, and lighting the sky with a brilliancy reflected by the glittering icicles.

Here is shown one of the natives that are scattered in small communities along the coasts of Arctic America. He is watching for a seal to appear through a hole in the ice. The Esquimaux are short and thick-set; their garments are made of seal, bear, or reindeer skins.

THE ARCTIC REGIONS.

The Arctic Regions of North America lie north of the Arctic Circle, and include the northern coast of the mainland, the adjacent islands, and the greater part of Greenland.

The Surface is a low plateau, consisting of a rocky, barren, treeless waste, corresponding to the Tundras of the Old World, vegetation being limited to lichens and mosses. In Alaska the soil is peaty and free from rocks or stones.

The icy regions include the land as much as the water. In fact, it has often been difficult to distinguish between the snow-covered land and the "hummocked" ice of the frozen sea.

The Climate is extremely cold, and the thermometer in winter has indicated as much as 70° below zero.

Owing to the continuous day in summer and night in winter (see p. 3) the variation of the temperature is very great. It is estimated that the Arctic ice mass diminishes under the sunshine of the long summer day to one third of its extent in the long winter night.

Of the land portions of the icy regions, by far the most extensive is the glacier field of Greenland. The whole of the interior of this island, the northern limits of which are still unknown, is believed to have, on the west side at least, one almost continuous level covering of ice and snow. Numerous fjords (*fjords*), or deep clefts formed in the rocky basis of the land, intersect the coast-line and run far into the interior. These are filled with ice, forming enormous glaciers, which move gradually towards the sea impelled by the weight of the accumulating masses of snow and ice on their upper sources.

The most extensive glacier known is the Humboldt Glacier on the coast of Kane Sea, presenting a perpendicular face from 300 to 500 feet high, and extending for fifty miles along the shore. Icebergs (see p. 10) are thrown off in enormous masses from this glacier, and its huge crevasses and fractures are on an unexampled scale.

These icebergs are carried by the Arctic currents through Baffin Bay and Davis Strait into the Atlantic Ocean, and gradually melt as they approach the Gulf Stream.

On the western side of the continent the icebergs do not reach beyond

¹ Hummocked; piled up in irregular masses.

Behring Sea, as the Aleutian Islands form a barrier to their further progress southward.

The Inhabitants of the Arctic Regions are the Esquimaux (*Es-ke-mos*), who are few in number and rove along the coast. The whale, seal and walrus, which are numerous, furnish them with both food and fuel. The principal land animals are the reindeer, musk-ox, polar bear, and the sleigh dog, the latter being used for drawing the sledges over the frozen snow.

Since the discovery of America frequent attempts have been made to find a "North-west passage" for ships through the Arctic Ocean from Baffin Bay to Behring Strait, with a view to shorten the distance to be traversed from Europe to Asia, but all have ended disastrously, and many lives have been lost in the attempts.

The most noted expedition was that of Sir John Franklin in the ships *Erebus* and *Terror* in 1845. Several years having elapsed without any tidings being heard, numerous parties were dispatched in search of them, notably those of Kane, Ross, Belcher, McClintock, and McClure. In 1855 McClintock discovered proofs that the whole of Sir John Franklin's party had perished. McClure succeeded in establishing the fact of a continuous water-passage, but had to abandon his vessel in the ice and then make his way overland.

Similar attempts have also been made to find a "North-east Passage," but none were successful until that undertaken in 1878-9 by the Swedish explorer, Prof. Nordenstjöld, who sailed from Gotthenberg in Sweden, in July, 1878, and passing through Behring Strait reached Yokohama in Japan in September, 1879. The latest expedition was that of Lieut. De Long in the *Jennette*, which resulted disastrously, most of the party being frozen to death or having perished from hunger.

Another aim of Arctic explorers has been to reach the North Pole, and various well-equipped expeditions have been fitted up for the purpose, the principal being under the command of Kane, Hayes, Hall, and Nares. Commander Markham, of Nares' Expedition, in 1876, reached the most northerly point yet attained, latitude 83° 20' 30", only 400 miles from the North Pole.

The route usually taken is shown in the above engraving, by way of Baffin Bay, Smith's Sound, and Kennedy Channel.

Many of the waters and islands are named after their explorers, as *Hudson*, *Baffin*, *Bay*, *Kane* Sea.



ED IN THE ICE

Here is shown one of the natives that are scattered in small communities along the coasts of Arctic America. He is watching for a seal to appear through a hole in the ice. The Esquimaux are short and thick-set; their garments are made of bear, or reindeer skins.

their further progress

are the Esquimaux, who rove along the numerous, furnish the principal land animals of the frozen snow. Attempts have been made to pass ships through the air, with a view to a passage to Asia, but all have been lost in the

climber in the ship *Erebus* without any tidings being given of them, notably those of 1855. McClintock discovered his party had perished in the dangerous water-passage, but had made their way overland.

"**North-east Passage,**" 1858-9 by the Swedish explorer in Sweden, in July, 1859, from Yokohama in Japan in command of the steamer "Le Long" in the party being frozen to

the **North Pole**, and in search of the party, the Englishmen Hall, and Nares. Commanded the most northerly expedition from the North Pole, 1858-9, returning, by way of Baffin Bay, to England, after a long absence, as *Hudson*.



Out great in them? breaks bay? continue the Atlantic. What sea entrance waters? direction? What part northern important west shore is on the peninsula southward isthmus? South America smaller tend? On the coast bays. The peninsula to Yucatan, Alaska, from California, Mariato, to Cape Name the groups of North America.

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II.—QUESTIONS ON THE PHYSICAL MAP.

Outlines.—What three oceans wash the shores of North America? What great island is north-east of the continent? What archipelago is between them? What is the general direction of the Arctic coast? What great bay breaks this coast? What island is at its entrance? What strait leads to that bay? What bay at the south? What island is near the eastern point of the continent? What gulf and strait cut it off? What is the general direction of the Atlantic coast? What two peninsulas partly enclose the Gulf of Mexico? What strait and what channel lead to that gulf? What large island is at the entrance? In what archipelago? What ocean current passes through these waters? What is the general direction of the Pacific coast? What peninsula is near its northern extremity? What important island is near the north-west shore? What archipelago is on the north-west? What peninsula and gulf break the south-west shore? What long isthmus connects North and South America? Between what smaller isthmuses does it extend? Name all the seas on the coast. The gulfs. The bays. The straits. Name all the peninsulas from Labrador to Yucatan. From Yucatan to Alaska. Name all the capes from Cape Farewell to Point Maria. From Point Maria to Cape Prince of Wales. Name the principal islands and groups of islands near the coast of North America.

Highlands.—What two great highlands are in North America? Which is the greater? What is its general direction? At what ocean does it end on the north? At what isthmus on the south? (*Tehuantepec*) What mountain ranges form its western border? What plain forms its eastern part? What mountains separate this plain from the rest of the highlands? What plateau basin is near the centre? In what direction does the Eastern Highland extend? Where does its northern limit begin? What minor highland extends across the continent to Labrador? (*The Height of Land*) What mountain system does the Eastern Highland contain? Near which coast of North America are there volcanoes? Where is the greatest group? Where the northern? Name one in each group. What volcano is in Iceland?

Lowlands and Drainage.—What plain lies between the two highlands? What ocean lies north of it? What gulf south? What name is given to its northern portion? What name to its southern portion? What river drains the north-eastern plain? What lakes does it drain? What islands are at the mouth of it? What low plateau lies east of the Northern Plain? What rivers drain the Northern Plain? Where do they flow? What lakes are connected with them? What river drains the greater part of the Southern Plain? Name its four chief branches. What lowland plain lies between the Eastern Highland and the Atlantic Ocean? Name the chief rivers which drain the Western Highland.

Ocean-currents. What ocean-currents flow along the western coast of North America? Along the eastern coast? How is the principal current of the Atlantic Ocean named?

Geographical Circles, etc. What geographical circles cross North America? In what zone is the greater part of this grand division? In what zone is the northern part? The southern part? Through how many degrees of latitude does North America extend (approximate estimate)? Through how many degrees of longitude?

Climate and Products. What do the red lines on the map show (begin with the most northerly)? What is their general direction, beginning from the east? What influence do the ocean currents have in the direction of these lines?

Where does wheat grow farthest north? Name two extensive forest regions. What parts of North America are noted for the production of wheat? Of maize? Of tobacco? Cotton? Sugar? Coffee? In what parts is gold found? Silver? Copper? Iron? Coal?

III. SURFACE AND DRAINAGE.

North America is naturally divided into four parts: the **Western Highland**, the **Eastern Highland**, the **Low Central Plain**, and the **Atlantic Plain**.

The **Western Highland**, or Great Plateau Belt, forms a wide and lofty table-land extending from the Arctic Ocean to the Isthmus of Tehuantepec. The **Sierra Nevada**, **Cascade**, and **Coast ranges** are on its western border, and the **Rocky Mountains** divide it lengthwise into two nearly equal parts. The long narrow strip facing somewhat sharply towards the West is called the *Pacific Slope*.

The **Rocky Mountains** may be regarded as the backbone of the continent. The massive chains of this range rise from a plateau which gradually increases in height, from the Arctic Ocean, where it is comparatively low, to Mexico, where it is about 8,000 feet high.

The highest peaks are in the north, but the ranges of these mountains reach their greatest elevation, about 14,000 to 15,000 feet, in the broad middle region of the table-land.

At the ends of this highland are many volcanoes. Of these, Mount St. Elias in the north (17,900 feet), and Popocatepetl (17,770 feet), in the south, are the highest peaks on the continent.

The long and mountainous isthmus of Central America may be regarded as a continuation of the plateau belt.



PHYSICAL VIEW OF NORTH AMERICA.



The Eastern Highland extends from the Plateau of Labrador nearly to the Gulf of Mexico. Its mountains are the low ranges of the **Appalachian** system, which are called by various names, and extend south-westward from the Gulf of St. Lawrence; and the **Laurentide Mountains** along the north shore of the St. Lawrence River.

The Eastern Highland has very little table-land. The highest peaks are from 6,000 to 6,700 in height, and the average elevation is about 3,000 feet.

The Atlantic Plain is the strip of low land between the Appalachian Mountains and the ocean.

It is generally low and level, except in New Brunswick and Nova Scotia, where some short ranges of hills rise.

The Low Central Plain lies between the two highlands, and extends from the Arctic Ocean to the Gulf of Mexico.

The extreme northern part forms the low **Arctic Plateau**, south of which is the **Northern Plain** and **Fertile Belt**, only separated from the southern part of the plain by a low swell called the *Height of Land*. This extends across the Continent from the Rocky Mountains to Labrador, and forms the watershed separating the rivers that flow into Hudson Bay from those flowing south or into the Great Lakes and St. Lawrence River. The southern part may be called the Basin or Valley of the *Mississippi*.

The **Rivers** of North America form six different systems, that is, they flow into six great bodies of water. These are:—The rivers that flow into the Arctic Ocean and Hudson Bay;—Those that flow into the Great Lakes and Gulf of St. Lawrence;—Into the Atlantic;—Into the Gulf of Mexico;—And into the Pacific Ocean.

North America is remarkable for the numerous depressions in its surface, more especially in the northern half of the Great Central Plain. These depressions cause the formation of

Great Lakes, the bottoms of which are often far below the level of the sea. The lakes that have no outlet, such as the Great Salt Lake, are largely impregnated with salt, and contain no fish, while the others abound in fish of various kinds.

The Missouri and the Lower Mississippi (together 4,200 miles in length), form the longest water-course known, and the Great Lakes drained by the St. Lawrence are the largest fresh water lakes on the globe, except possibly the Nile and its headwaters, the precise length and extent of which are not yet accurately explored.

III.—CLIMATE, VEGETATION, ANIMALS, MINERALS.

The West Indies, Central America, and the lowlands of Mexico, have a tropical or constantly warm climate.

The season of tropical rains lasts many weeks (see page 15), the rest of the year being dry.

The vegetation is luxuriant—coffee, sugar, maize, cotton, and tobacco, are extensively cultivated, and the banana, pine-apple, lemon, orange, and other tropical fruits, are produced with little labor spent in their cultivation. European grains are grown on the plateaus. The forests abound in mahogany, rosewood, and palm trees.

The Northern Part of the continent has a very cold climate in the north and east, but is warmer on the western coast.

The coldness of the east is caused by the Polar Current, which passes along the eastern coast to Newfoundland, and by the ice which nearly closes the broad entrance to Baffin Bay. Hudson Bay, however, is said to be open for four months in the year.

The western coast in the same latitude, from Alaska to the Columbia River, has a much milder climate and frequent rains, the effect of the warm Japan Current and the Return Trade Winds of the Pacific. The influence of this climate is also felt on the corresponding eastern slope of the Rocky Mountains.

The moist regions of the west, in the Rocky Mountains, on the western slopes of the Sierra Nevada, and from the Columbia River to Alaska, are covered with forests of gigantic pines, cedars, and other evergreens.

The Central Part of the continent has a more varied climate—warm in the south, colder in the north, and very dry in the Great Western Highland.

Moist winds from the Atlantic Ocean and the Gulf of Mexico cause frequent rains in the Eastern Highland and in the Southern and Atlantic Plains. East of the Mississippi, the country was originally covered with one vast forest of oak, chestnut, pine, and other trees, of which a large part in the lowlands has been cleared away. This forest extends into the Northern Plain, where the trees are mostly pines and firs; beyond that, mosses and lichens are the only vegetation.

The wild animals are shown on page 21. Besides these, there are the polar bear, the wolverine, the wolf, fox, beaver, and alligator. Great numbers of domesticated animals, such as the horse, ox, sheep, and hog, are raised by the civilized inhabitants; these were originally introduced from Europe.

Cotton is the chief production of the lowlands near the Gulf of Mexico; maize of the southern, and wheat of the northern portions of the low central plain.

Most of the cereals, such as wheat, oats, barley, and rye, are not indigenous to the New World, but were introduced from Europe. The most characteristic native cereal is maize, or Indian corn, which is extensively cultivated from Central America and the West Indies to high latitudes in this grand division.

The rainfall upon the western slopes of the lofty mountains bordering the Great Western Highland leaves but little moisture to be carried over to the



MOUNT POPOCATEPETL, MEXICO.

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DIVISIONS OF TIME.—Owing to the difficulty experienced by travellers in regard to the Time-Tables of the different railways in North America, a Railway Time Convention was held in Chicago, Ill. (U.S.), on Oct. 11th, 1883, and a **Standard Time** was decided upon for the Continent.

Five meridians of time were adopted, each regulating the time of its own division of longitude; they are 15° of longitude apart, which is equal to an hour in time. Thus, Intercolonial Time is taken from the 60th meridian W. of Greenwich; Eastern Time from the 75th meridian, or one hour slower than Intercolonial Time; Central Time from the 90th meridian, or another hour slower; Mountain Time from the 105th meridian; and Pacific Time from the 120th meridian, or 4 hours slower than Intercolonial Time.

NOTE—The red lines on the map show the limits of the different time divisions.

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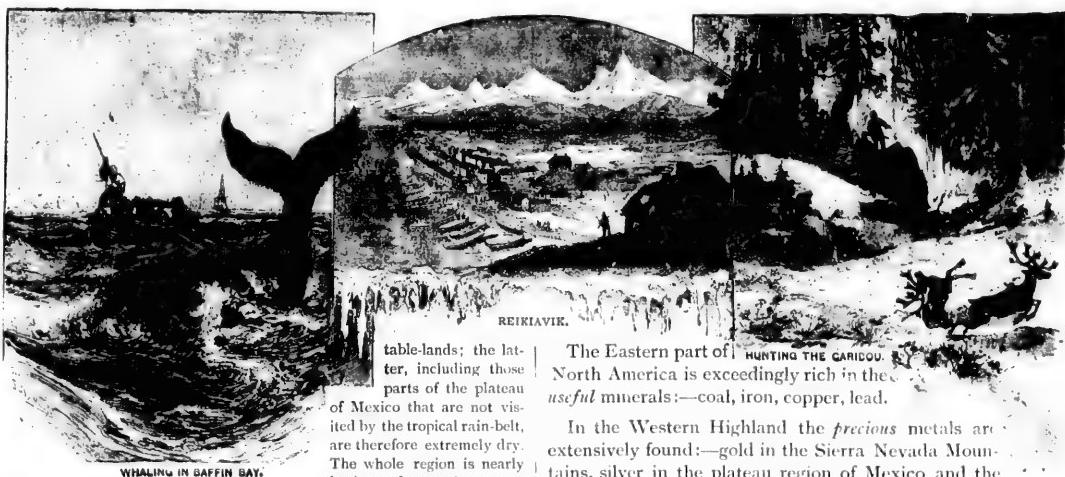
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WHALING IN BAFFIN BAY

in the northern part, and the sage-bush and cactus are the principal plants which the parched soil produces.

table-lands; the latter, including those parts of the plateau of Mexico that are not visited by the tropical rain-belt, are therefore extremely dry. The whole region is nearly destitute of vegetation, except

The Eastern part of North America is exceedingly rich in the useful minerals:—coal, iron, copper, lead,

In the Western Highland the *precious* metals are extensively found:—gold in the Sierra Nevada Mountains, silver in the plateau region of Mexico and the United States, and gold and silver in the Rocky Mountains. Coal is also abundant in the North-west.

POLITICAL NORTH AMERICA.

QUESTIONS ON THE MAP.

Countries.—What two countries occupy the greater part of North America? Which is farther north? What country is north-east of Canada? North-west? South-west of the United States? South-east of Mexico? Name the countries of North America.

Danish America.—To what country in Europe does it belong? (*Denmark*.) Name its two principal islands. What cape is at the southern point of Greenland? What is the chief town of Iceland? (See map of Europe.) What towns are in Greenland? What is the most northern town in North America?

British America.—What group of islands is on the north of the continent? What islands are west? At the entrance to Hudson Bay? In the Gulf of St. Lawrence? What country is on the south? On the north-west? What large peninsula is in the eastern part? In the south-eastern? What capes on the east coast? What straits on the east coast? On the west?

What mountains are in the western part? In the eastern? What great river is in the eastern part? In the north-west? In the west? In the centre? What volcano on the borders between Alaska and Canada.

What large cities are on the St. Lawrence River? On the Ottawa River? On Lake Ontario? On the east coast? In Newfoundland? What principal cities in the interior? On the west coast? On Vancouver Island?

United States.—What country lies north of the United States? South west? What gulf south? What islands south-east of Florida? Name the capes on the east coast of the United States. What cape is at the south-eastern point of the United States? What capes on the west coast?

What mountains are west of the Sierra Nevada? What two bays are on the east coast of the United States? What river flows into the Atlantic Ocean near Long Island? What river flows between Mexico and the United States? Into what does it flow? What mountains does the Columbia break through? What lake is situated between the Colorado and the Columbia?

What two cities are near the head of Chesapeake Bay? What is Washington? (*The capital of the United States.*) What city is north-east of Baltimore? North-east of Philadelphia? North-east of New York? At the mouth of the Mississippi? Near the mouth of the Missouri? On Lake Michigan? On the Pacific coast? On the north bank of the Ohio?

To what country does Alaska belong? What is the name of its chief river? Where does it rise? Into what does it flow? What island is in the southern part? What town is on it? What peninsula is in the south-west?

Mexico.—What peninsula and gulf are in the north-west of Mexico? What cape at the end of the peninsula? What mountains in Northern Mexico? What is the chief town? What volcano is near it? What city lies east of Mexico?

Central America.—What waters wash the shores of Central America? What lake is in Central America? What city is in the north-west? Name the two largest islands in the West Indies. What city is in Cuba? What city is in Jamaica?

REVIEW EXERCISES.

(For models, see Review of Western Hemisphere, page 12.)

Countries.—Where is it? How bounded? What is the chief town or city?

MODEL.—Mexico is the south-western part of North America. It is

bounded on the north by the United States, on the east by the Gulf of Mexico, on the south by Central America and the Pacific Ocean, on

Danish America? Dominion of Canada? United States? Mexico? Cen-

Islands.—Where situated? Arctic Archipelago? Greenland, D.? Southampton, B.? Iceland, D.? Cape Breton, B.? Newfoundland, B.? Bermuda Islands, B.? Long Island, U.S.? West Indies? Bahama Islands, B.? Jamaica, B.? Cuba, S.? Hayti, I.? Porto Rico, S.? Vancouver, B.? Queen Charlotte, B.? Baranov, U.S.?

NOTE.—The countries to which they belong are thus indicated; Denmark, D.; Great Britain, B.; Spain, S.; United States, U. S.; Independent, I.

Peninsulas.—From what part of North America does it project? Between what waters? Labrador? Nova Scotia? Florida? Yucatan? Alaska?

Capes.—From what coast does it project? Farewell? Race? Sable, N.? Cod?

Isthmus.—What countries does it connect?
Tehuantepec? Panama? Isthmus of Central America?
Mountains.—Where are they? Appalachian? Rocky? Sierra Madre?
Sierra Nevada? Cascade? Coast ranges? Popocatepetl (v.)? Hecla (v.)?
St. Elias (v.)?

Seas, Gulfs, and Bays.—Where is it?—Baffin? Hudson? James? St. Lawrence? Fundy? Delaware? Chesapeake? Mexico? Campeachy? Honduras? Behring? Caribbean? California?

Straits.—Between what lands? What waters does it connect?

Davis? Hudson? Belle Isle? Florida? Behring? San Juan de Fuca?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what body of water?—Yukon? Mackenzie? Churchill? Nelson? Severn? Saskatchewan? St. Lawrence? Hudson? Mississippi? Missouri? Arkansas? Ohio? Rio Grande? Colorado? Columbia? Fraser?

Lakes.—Where situated? What outlet has it?

Great Bear? Great Slave? Athabasca? Winnipeg? Superior? Michigan? Huron? Erie? Ontario? Great Salt? Nicaragua?

Cities and Towns.—In what country is it? In what port? On or near coast water?

Reikiavik? Upernivik? St. Johns, Nfld.? Halifax? St. John? Ottawa? Montreal? Quebec? Toronto? Winnipeg? Victoria? Washington? Philadelphia? Boston? New York? Baltimore? New Orleans? Cincinnati? St. Louis? Chicago? San Francisco? Mexico? Vera Cruz? Guatemala? Havana? Kingston?

DIVISIONS OF NORTH AMERICA.

The Political Divisions of North America are:—

DANISH AMERICA,	UNITED STATES,
ALASKA,	MEXICO,
DOMINION OF CANADA,	CENTRAL AMERICA,
NEWFOUNDLAND,	WEST INDIES.

DANISH AMERICA.

Danish America consists of Greenland and the Island of Iceland. It belongs, as the name shows, to Denmark, a kingdom of Europe.

Greenland is either one large island, or a number of islands connected by vast masses of ice. The northern extremity has never been reached, and its extent is unknown. The interior is an immense ice-field, and is unexplored. A little barley and a few garden vegetables are raised in the south along the coast.

The **Inhabitants** (about 10,000) are chiefly Esquimaux, who subsist by fishing and seal hunting, and about 300 Europeans (Danes), who carry on a small trade in dried, unsalted codfish (called *stock-fish*), seal and reindeer skins, and whale and seal oil.

Their villages are scattered along the west coast northward from Cape Farewell, and the different districts are governed by Danish directors.

Greenland received its name about 900 years ago because the southern part looked green and fertile to the first comers from Iceland, and when it is probable the climate was less severe than at present.



A GEYSER.

Iceland, an island about 160 miles east of Greenland, is about 42,000 square miles in extent. It is evidently volcanic in its formation, and several volcanoes, of which the principal is Mt. Hecla, now exist, and from time to time have violent eruptions.

The surface is mountainous, and is covered with glaciers and great lava fields. The **Geysers**, or boiling springs, of which there are a hundred within a circuit of two miles, are a great natural curiosity.

The **Climate** is milder than that of Greenland, owing to the warm south-west winds and currents that bathe its shores.

The **Inhabitants** (about 72,400) are descendants of the Norwegians, who settled on the island about 1,000 years ago. They still speak the old Norse language.

The **Government** is under the control of Denmark, but the people have the right of making their own laws and of administering the affairs of the island.

The chief **Commerce** is in eider-down, collected from the vast quantities of eider-ducks which frequent the island, wool, Iceland moss and stock-fish. Pasturage is abundant, and sheep and cattle are the chief dependence of the people.

Reikiavik (*steam-town*, so called from the hot springs near it,) is the capital. It is a collection of one-storey wooden buildings, but has a college and a public library.

ALASKA.

Alaska, formerly Russian America, was bought from Russia by the United States in 1867. In extent it forms nearly one-sixth of the area of the whole United States, but contains only about 30,000 inhabitants, including Indians and Esquimaux.

Mountain chains extend along the whole coast, and through the islands. They contain many volcanoes, of which the greatest is Mount St. Elias on the border of the Dominion.

In the south are forests of large trees, and garden vegetables can be raised, but the north is within the Arctic Circle, and is a barren desert with a peaty soil.

The chief importance of Alaska is derived from its fisheries and furs. Great numbers of fur-seals and sea-otters are captured.

Sitka is the residence of the collector of customs, but the territory of Alaska is still unorganized.

The **Aleutian Islands**, which belong to Alaska, are volcanic in formation. They are inhabited by the Aleuts, an uncivilized tribe, similar to the Esquimaux.

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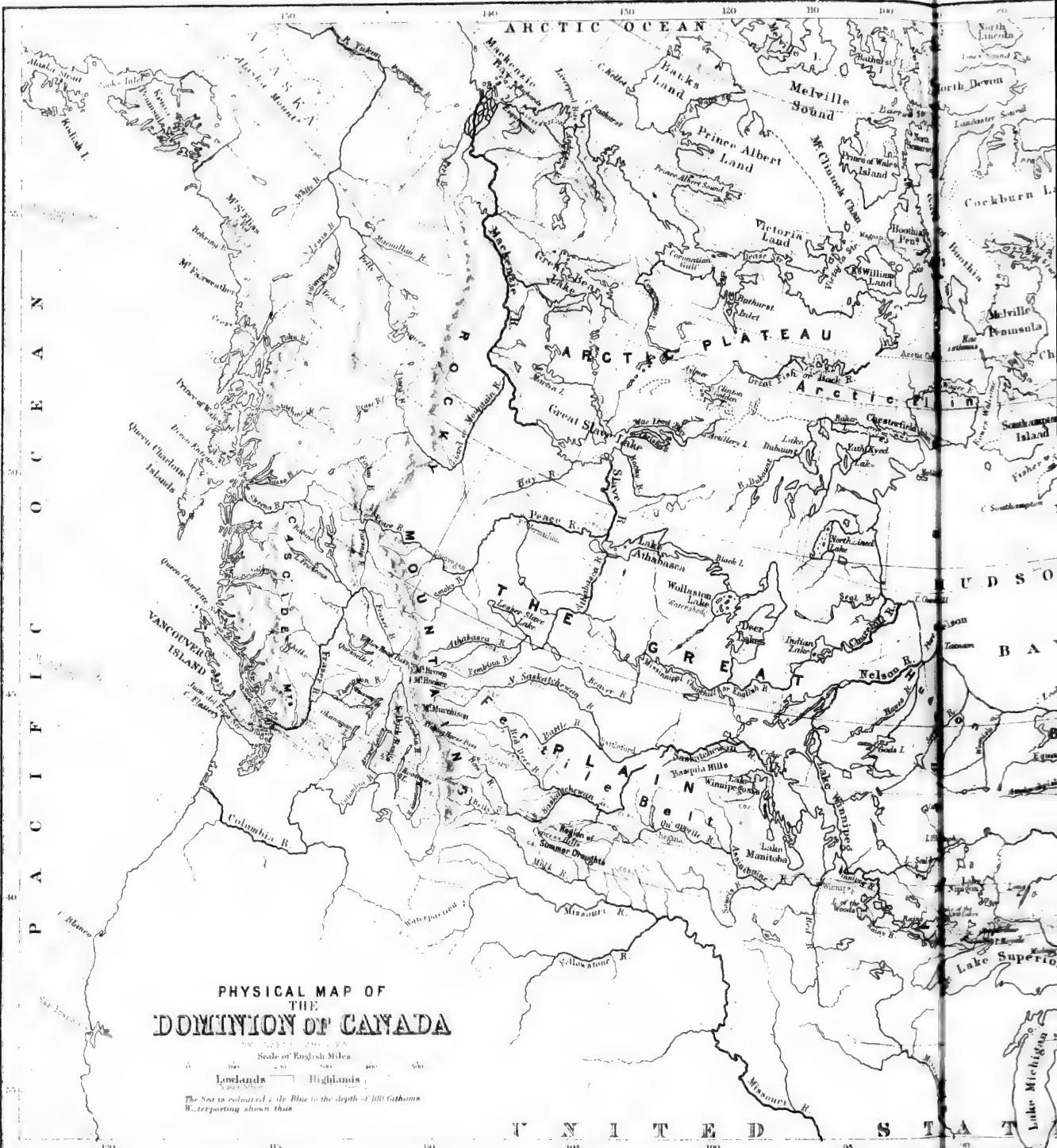
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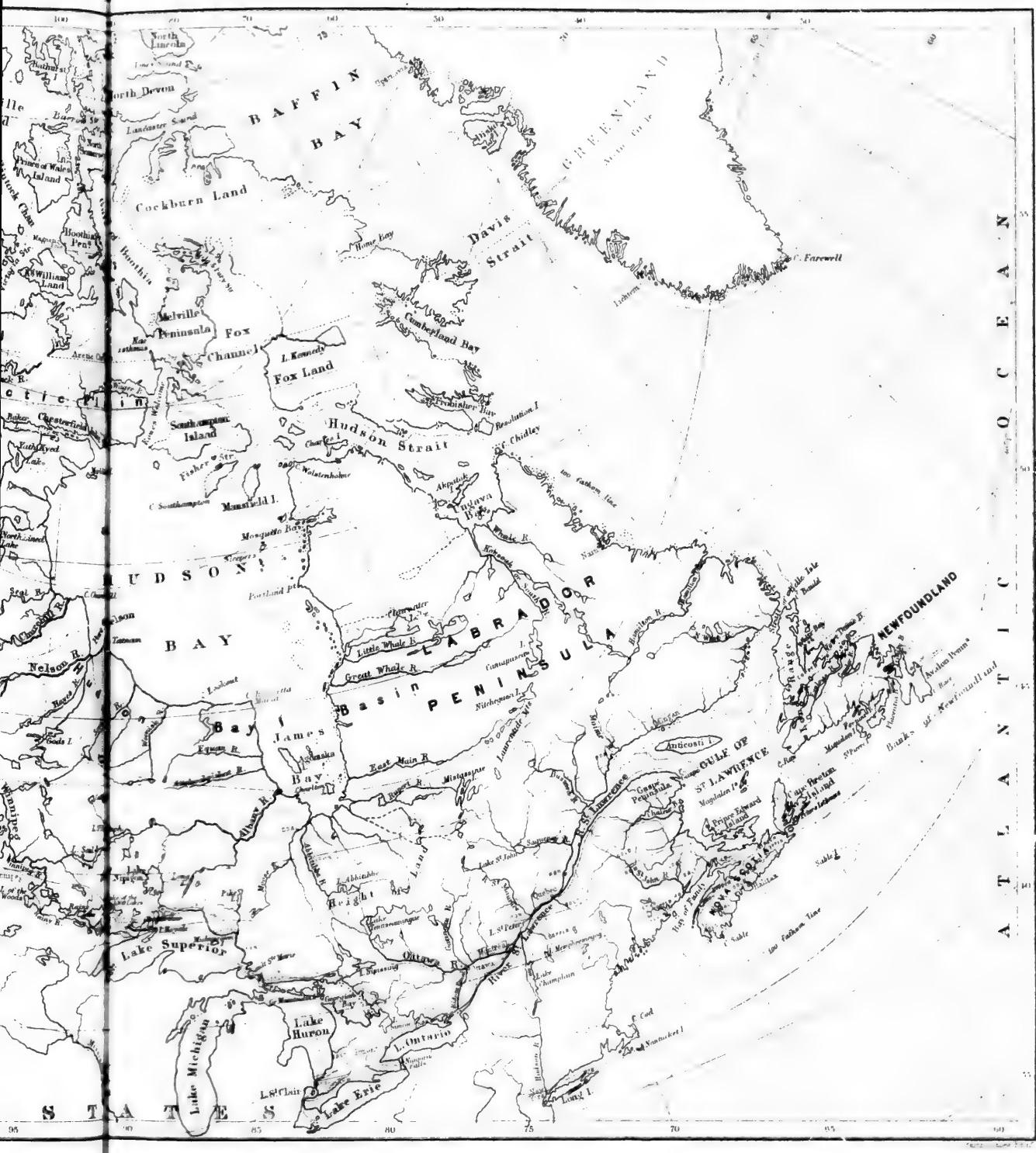
PHYSICAL MAP OF
THE
DOMINION OF CANADA

Scale of English Miles

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DOMINION OF CANADA.

I.—POSITION AND EXTENT.

The **Dominion of Canada** occupies the whole northern part of North America, with the exception of Alaska and Greenland, previously mentioned.

It extends from the Atlantic to the Pacific Ocean, and from the United States to the Arctic Ocean. Its greatest extent from Labrador to Vancouver Island is about 3,100 miles, and from Lake Erie to Baffin Bay about 1,900 miles.

The **Area** of Canada is about 3,470,000 square miles. This is about the same as that of the United States, including Alaska, and is almost equal to that of Europe.

II.—QUESTIONS ON THE PHYSICAL MAP.

Outlines.—What country is south of Canada? What three oceans wash the shores of Canada? How is the western half of Canada separated from the United States? (*By the 49th parallel of latitude.*) What lakes form part of the boundary of the eastern half? What great bay nearly cuts the country in two? What is its southern extremity called? How is Hudson Bay connected with the Atlantic? What great peninsula forms the eastern part of Canada? What country is on the north-west of Canada? What large Danish island is north-east? How is it separated from Canada? What large island is off the extreme east? What gulf does it nearly enclose? How is it separated from the mainland on the north? What peninsula is south-west of it? Name islands in the Gulf of St. Lawrence? What island is between Nova Scotia and Newfoundland? What bay is between Nova Scotia and the mainland? What important island is off the west coast? How is it separated from the mainland? From the United States? What group of islands is

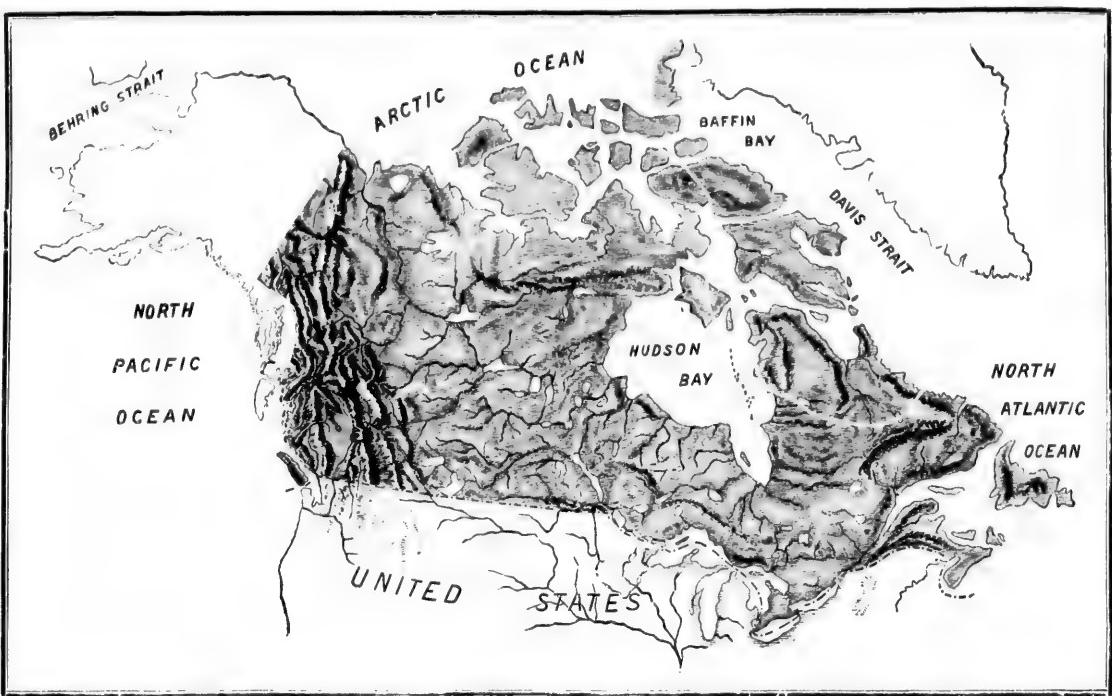
north of Vancouver Island? How are they separated from the mainland? To whom do the islands and strip of coast-land north of Queen Charlotte Islands belong? (*To the United States.*)

Highlands.—Which is the great highland of Canada? In what direction does it extend? At what ocean does it end in the north? Into what country does it extend on the south? What mountains form the eastern part? The western? What is the central part called? What other highland is there in eastern Canada? Of what mountain chain is it a continuation? What is the general direction? What are the highlands of the Great Central Plain called? (*Height of Land.*) What heights of land extend from the Rocky Mountains? In what direction? How far? What basins do they separate? What volcano is on the north-western border of Canada?

Lowlands and Drainage.—What great plain extends between the two highlands? What name is given to the north-western portion? What low plateau is in the extreme north? What is the southern portion called? The central portion? What great river drains the eastern part of Canada? What lakes are formed in its course? Which are its three principal tributaries on the north? What one on the south? What lakes does the Richelieu drain? What river flows from the eastern highland into the Bay of Fundy? What is the principal river of the Great Southern Plain called? Where does it flow? What great river drains the Arctic Plain? Which are its principal tributaries? What lakes does it drain? Where does it flow? What rivers flow into Hudson Bay? What lake is drained by the Nelson River? What rivers flow into Lake Winnipeg? Which are the principal rivers that drain the Western Highland? Where do they flow?

Geographical Circles, etc.—What geographical circle crosses Canada? In what zone is the greater part of the country? What ocean current is on the north-east? On the south-east? On the west?

Climate and Products.—What do the red lines on the map show? In what part do they rise farthest north? What are the principal vegetable products in the south-east? Near the Great Lakes? In the Great Southern Plain, or Fertile Belt? Name the kinds of trees that are found farthest north. Those farthest south. On the western coast. In the Great Southern Plain.



PHYSICAL VIEW OF CANADA.

Round the Great Lakes? In the St. Lawrence Valley? What fisheries are carried on in the north-east? East of Newfoundland? In the Gulf of St. Lawrence? In the south-east? In the west? What metals and minerals are found in the Western Highland? In the Eastern Highland? In the Atlantic Plain? Near the Great Lakes? In the valley of the St. Lawrence?

III.—SURFACE.

The **Surface** of the Dominion, like that of North America generally, may be divided into four principal parts:—the **Western Highland**, the **Eastern Highland**, the small **Atlantic Plain**, and the **Great Central Plain**.

These form natural political sub-divisions, which were formerly independent of each other, although all belonged to Great Britain (as they still do), but are now united under the name of the **Dominion of Canada**.

IV.—WESTERN HIGHLAND.

The **Western Highland** includes the plateau from which the Rocky Mountains rise, westward to the Pacific Ocean.

The **Rocky Mountains** rise from a plateau which is much higher on the west than on the east side, and form a lofty range parallel to the Pacific Ocean. Close to the coast is another lower parallel chain called the **Cascade Mountains**. Between the latter and the Rocky Mountains the plateau is intersected

by deep, narrow valleys, through which several large rivers flow. On the Pacific side of the Cascade Mountains the descent is steep and often almost perpendicular, and the rivers flow through narrow gorges called *cañons* (*can-yons*). On the eastern side of the Rocky Mountains the descent is more gradual to the Great Central Plain, and the rivers flow through depressions of the plateau, which form alluvial valleys two or three miles in width. These valleys are often 600 to 800 feet below the general level of the country.

The **Cascade Range** is without any very remarkable peaks. It has an average elevation of 5,000 to 6,000 feet in British Columbia, and north of that is supposed to attain a great height; but, as in the case of the Rocky Mountains, little is known accurately of the mountains in that region. In the **Rocky Mountains** rise the magnificent peaks—Mt. Brown (16,000 ft.), Mt. Hooker, nearly the same height, and Mt. Murchison, a little less.

The **Coast Range** of mountains, which extends from Alaska to the United States, appears in British Columbia as a series of islands along the coast, and attains its highest summit, about 7,500 feet, in Mt. Victoria, Vancouver Island.

These ranges enclose the valleys of the **Frazer** and **Columbia** Rivers on the south, and the **Skeena**, **Stikine** (*Steeken*), **Yukon** and **Peace** Rivers on the north.

The head stream of the **Frazer River** at the base of the Rocky Mountains is an impetuous torrent; after a northward course of nearly 200 miles, it turns abruptly and flows due south, where it becomes a broad stream, occasionally interrupted by rapids; a large portion of it may be made available for navigation from April till November, when the river is free from ice.

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Lower down it is remarkable for the step-like, or terraced formation of its banks. The valley then contracts, and for 150 miles the river rushes through a narrow cañon, and in passing through the Cascade range it sweeps for fifty miles through a stupendous cleft, on each side of which the mountains rise to the height of 6,000 or 7,000 feet. Emerging on the lower coast-land it becomes a navigable river for about 100 miles to New Westminster.

The **Columbia** has its sources on the eastern side of the central plateau. The head stream of the river flows from a lake only 2,300 feet above the sea, in a deep valley at the back of that part of the Rocky Mountains where the highest summits rise. The course of the river is first north-westward through parallel chains of the Rocky Mountains; then, on reaching Mount Brown, its flow is suddenly diverted to due south, and continues in this direction for 300 miles, until it reaches the great **Plain of the Columbia**, in the United States when it turns westward, and breaking through the Cascade range, flows into the Pacific Ocean.

The **Skeena** and **Stekin** also pass through the mountain region of the outer or western edge of the plateau, and the latter for a distance of eight miles is shut in on both sides by high, perpendicular rocks. This part of its course is known as the "Great Cañon," and in one part the walls of it approach so closely as to hold back the river, when it is in a state of flood, and form a fall of sixty feet in height. In the lower part of its course, the Stekin is navigable for about 150 miles.

The **Yukon** River also rises in the central plateau, and flows northward into Alaska, and then westward into Behring Sea. It is the largest river of the Western Highland, but is valueless for commerce, as it is frozen over for the greater part of the year.

The **Peace** River has its springs in the Peak Mountains, one of the central heights of the plateau, on the opposite side of which the Stekin has its sources. Flowing in a north and eastward course, it passes through a gorge in the Rocky Mountains, and joins the **Athabasca**, which rises near Mts. Brown and Hooker, to form the **Mackenzie River**. Like most of the rivers of the North-west, these flow through a depression of the land ranging in depth from 600 to 800 feet.

The sediment of the Frazer, Upper Columbia, and Stekin rivers, and of their tributaries, is in many parts rich in gold dust, worn out of the rocks in the mountains where they rise.

V.—EASTERN HIGHLAND AND ATLANTIC PLAIN.

The **Eastern Highland** is small and low in comparison with the Western.

It consists of a ridge called the **Notre Dame Mountains** (which is an extension of the Appaachian Chain), and another lower chain called the **Laurentide Hills**.

The **Notre Dame Mountains**, which extend from the Green Mountains of Vermont to the extremity of the peninsula of Gaspé, and across the St. Lawrence River through Labrador, nowhere exceed 3,800 feet in height (Mt. Logan, 3,768 feet). The low range of the **Laurentide Hills** extends from west of Lake Superior to the St. Lawrence, and then to the plateau of Labrador, where it joins the height of land which divides the tributaries of the St. Lawrence from the rivers that flow into Hudson Bay. Their height does not exceed 2,000 feet.

These two ranges enclose the valley of our noble River St. Lawrence, which is the outlet for the **Great Lakes** and forms Canada's great water highway to the Atlantic Ocean.

East of the Notre Dame Mountains is the small **Atlantic Plain**, sloping gradually toward the Atlantic Ocean. It has an undulating surface, varied by short ranges of low hills round the Bay of Fundy and on the north shore of Nova Scotia and Cape Breton.

The **Cobequid Mountains** (1,200 feet) in the north of the Nova Scotia Peninsula, and the **North** and **South Mountains** in the west, are the principal.

The latter form a line parallel to the Notre Dame Mountains, and may be considered as a continuation through Cape Breton of the ridges of Newfoundland.

The **St. Lawrence** is the great river of the eastern drainage, just as the Frazer River is of the west, the Mackenzie of the Central Plain, and the Saskatchewan of the Southern Plain.

It provides uninterrupted navigation for upwards of 2,000 miles, as the Falls of the St. Marie and Niagara Rivers and the rapids of the St. Lawrence are overcome by canals.

The upper part of the St. Lawrence consists of the Great Lakes, **Superior**, **Michigan**, **Huron**, **Erie**, and **Ontario**, with the smaller lake **St. Clair** between Huron and Erie.

These lakes may be considered as immense basins. None of them have any great tributary rivers, so that the watershed is never more than 100 miles from their shores, and in some parts as on the south-west of Lake Michigan and on the south of Lake Erie—it approaches very close to the coast.

A canal connects Lake Michigan with the head of steamboat navigation on the Illinois River, one of the tributaries of the Mississippi, and two canals connect Lake Erie with the Ohio River.

Below the lakes the drainage on the south is still from a narrow strip of land, but on the west and north it is more extended.

Lake Superior is, so far as is known, the largest body of fresh water on the surface of the globe. It is 360 miles long from east to west, and 100 miles across at its widest part. Its depth is variable but very great, the maximum being about 1000 to 1200 feet. Islands are numerous, especially along the north coast: **Michipicoten**, in the east, and **Isle Royal** (U.S.), opposite Thunder Bay, are the principal. The north shore is high and rocky, while the south shore is sandy, intersected with limestone rocks. The latter have been worn by the action of the weather and the waves into fantastic forms, and in one place form what are called the *Pictured Rocks*. Lake Superior is 627 feet above the sea-level.

The overflow of Lake Superior is carried off by the **St. Marie River**, upon which is the Sault (*Soo*) St. Marie, or Falls of St. Mary, a rapid about two miles long, with about 22 feet fall. This is surmounted by means of a canal on the United States side. Below the rapids the river divides into several channels enclosing numerous islands and forming small lakes. After a course of about 100 miles it enters Lake Huron.

Lakes Huron and **Michigan** are of nearly equal extent, and are connected by the *Straits of Mackinaw*. They are similar in form, each having a number of islands in the northern part, and each having its shores in the south remarkably regular and rounded, without any islands. The shores are highest and most abrupt on the north, but are nowhere of great height.

On the east side of Lake Huron is a large arm called the **Georgian Bay**, and on the west side of Lake Michigan is a similar arm called **Green Bay**. On the opposite side, in Lake Huron is **Saginaw Bay**, and in Lake Michigan, **Grand Traverse Bay**.

The greatest depth of these lakes is from 800 to 1000 feet, and they are 578 feet above the level of the sea.

Mackinaw Strait, which unites the northern parts of these lakes, is 8 miles in width and 35 miles long. It encloses the island of Mackinaw, which has been made one of the public parks of the United States.

The river **St. Clair** flows from Lake Huron, and expands into **Lake St. Clair**. Contracting again, it forms the **Detroit River** and connects with **Lake Erie**. The whole length is about 100 miles.

Lake Erie is the shallowest of the great lakes, having an average depth of only 75 feet (nowhere exceeding 200 feet), and is 565 feet above the sea. The coast is generally low, and at the western end there is a number of small islands, famous for their vineyards.

The **Niagara River** connects Lake Erie with Lake Ontario. It flows swiftly, and 14 miles from Lake Ontario it forms, after a series of rapids, the great **Falls of Niagara**, a cataract about 1,400 yards in width. This waterfall is divided into two parts by **Goat Island**, the larger, on the Canadian side, being called the **Horseshoe** from its shape, falling 154 feet; and the smaller, on the side of the United States, falling 163 feet. From this the river rushes through a rocky chasm, and at a point where it takes a rapid bend forms the **Whirlpool**, flowing afterwards with a smooth but rapid current into Lake Ontario.

To overcome the rapids and falls of the Niagara River, a canal was built, accommodating vessels of 500 tons, and in 1882 a new and much larger canal was opened, which is capable of carrying vessels of 1,500 tons.

Lake Ontario is the smallest of the Great Lakes but is very deep. It has a maximum depth of 636 feet, so that the deepest part of its bed is 374 feet below the level of the sea. The surface is 262 feet above the sea.

The shore is low and unbroken until the point of outflow is reached in the north-eastern part, where the St. Lawrence as a river begins and where the upper part of its course is termed, from its numerous islands, the **Lake of the Thousand Islands**. The largest of these are *Amherst Island* and *Wolf Island*, the latter being about 18 miles long.

The *St. Lawrence* proper may be said to begin at the Lake of the Thousand Islands, after which the channel becomes narrower and the strength of the current increases. A series of rapids then occur which are navigable for steamers going down the river, and are overcome by canals for vessels ascending. Before reaching the Island of Montreal the river has several lake expansions, as *Lake St. Francis* and *Lake St. Louis*, and below Montreal is *Lake St. Peter*.

The river is crossed at Montreal by the magnificent Victoria Bridge, nearly two miles in length, built for the Grand Trunk Railway.

Below Montreal there is no interruption to the navigation, and the largest ocean steamships can come to the city. The tide, however, is not sensibly felt above Three Rivers.

The **Rivers** of the Atlantic Plain are mostly short and rapid, as the watershed is never very distant from the Coast. The only exception is the River St. John, which flows into the Bay of Fundy, and has a course of about 450 miles.

VI.—GREAT CENTRAL PLAIN.

The **Great Central Plain** extends from the Rocky Mountains to the watershed of the St. Lawrence, and north to the Arctic Ocean.

The **Surface** forms a vast undulating plain, with numerous low hills and lakes, sloping from the Rocky Mountains towards the north and east, and may be divided into the **Arctic Plain**, the **Great Southern Plain or Fertile Belt**, and the **Hudson Bay Basin**.

At the foot of the Rocky Mountains the height of the land is from 2,000 to 4,000 feet above the sea.

On the south the watershed and some low ranges of hills separate the Great Southern Plain from the plateau of the Missouri in the United States.

Farther north one height of land, from 2,000 to 2,500 feet above the level of the sea, extends eastward, enclosing the plain of the Saskatchewan, and another north-eastward, separating the rivers that flow into the Arctic Ocean from those flowing eastward into Hudson Bay.

On the east is the plateau of Labrador and the watershed between the Hudson Bay Basin and the St. Lawrence Basin. From these heights the rivers flow chiefly into Hudson Bay.

The **Arctic Plain** extends from the height of land between the Athabasca and Saskatchewan Rivers to the Arctic Ocean.

The southern part is a continuous forest of aspen, scrub oak, poplar, and spruce, but the north is a rocky, barren desert, which, along the Arctic shore, forms a low plateau belt about 200 miles wide with numerous loops extending southward about midway between the rivers.

The **Centre** of the Arctic Plain may be considered as **Great Slave Lake**, which is about 600 feet above the sea-level.

The principal River is the **Mackenzie**, one of the largest on the Continent, which drains most of the eastern slope of the Rocky Mountains. It is broad and rapid, but is not available for navigation owing to numerous rapids and sand banks and to its being frozen the greater part of the year.

The **Great Southern Plain** forms a vast stretch of level prairie land, intersected by low hills rising from 100 to 600 feet above the surrounding country. It extends from the Rocky Mountains to Hudson Bay, and between the northern watershed which separates it from the Arctic Plain and the southern watershed which separates it from the plateau of the Missouri. The width is about 300 miles. This country is called the **Great Fertile Belt** of the north-west.

The **Rivers** are numerous, and many small lakes and marshes or sloughs occur, the latter being generally dry in summer.

The **Saskatchewan** is the great river of this region, and is navigable for nearly 700 miles from Lake Winnipeg, although the north branch is somewhat obstructed by sand banks. Its upper course consists of two branches which rise not far apart on the west side of Mt. Baldy, one of the summits of the Rocky Mountains, and flow north-east and south-east, till when

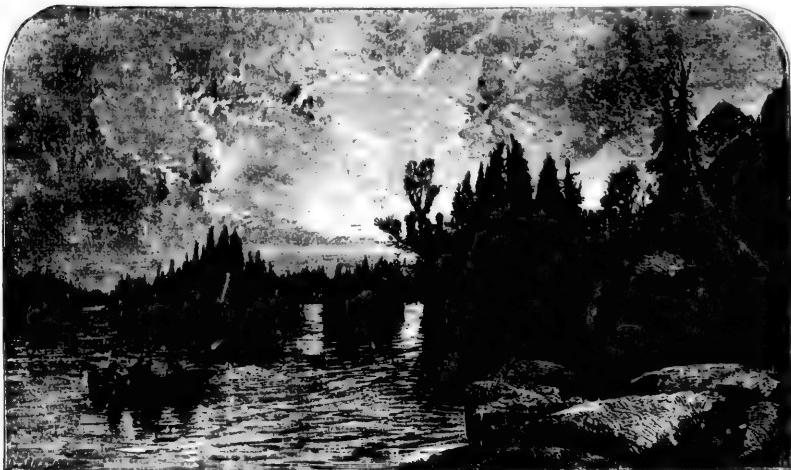
300 miles apart, they gradually draw together and meet again at about 500 miles from their sources. These flow through a depression in the level prairie from 150 to 300 feet deep, and from one to two miles wide.

The **Red River**, which rises in the height of land in Minnesota, near the sources of the Mississippi, and flows into Lake Winnipeg, has a course of nearly 700 miles, and is valuable for navigation. The **Assiniboine** is an important tributary, draining the southern part of the Great Southern Plain.

Hudson Bay forms a great central basin into which the waters of the central region flow from the height of land which extends all round at a distance of from 400 to 600 miles. It also receives the drainage of the great plains of the Saskatchewan direct from the Rocky Mountains.

The **Nelson River** which drains Lake Winnipeg is the most important river of the Hudson Bay Basin. The **Churchill** is the next in importance, rising north of the height of land separating the Athabasca from the north branch of the Saskatchewan.

On the western side of Hudson Bay the **Lakes** and **Rivers** are larger and more numerous than on the eastern side, Lake Winnipeg being as large as Lake Erie. The rivers flowing into Hudson Bay are interrupted by numerous rapids and are not generally available for navigation.



A VIEW IN THE LAKE OF THE THOUSAND ISLANDS.

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VII.—CLIMATE, VEGETATION, ANIMALS, MINERALS.

Canada occupies the northern half of the Temperate Zone in North America, and extends to the Arctic Ocean. The **Climate**, therefore, varies according to the position, or to the physical formation of the different parts of the country.

The whole of the **Southern Part** of Canada, even though varying 10 degrees (695 miles) in latitude, has a remarkable average heat in summer, while local influences create a considerable difference in the cold of winter. This is due mainly to the ocean currents and winds. In the east, owing to the polar current from the Atlantic Ocean, the Isothermal Line, or line of equal average heat, in summer is lower than in the west, while in the Great Central Plain it rises higher than in either.

The **Pacific Coast** has a much milder climate than the Atlantic Coast.

This is owing to the influence of the warm Japan or North Pacific Current, and to the Return Current which flows northerly from Vancouver Island. These currents resemble the Gulf Stream of the Atlantic, and with their accompanying winds produce the same result on the western coast of Canada as the Gulf Stream and the Return Trade Winds do on the western coast of Europe (see p. 11).

The **Western Highland** is covered with dense forests, especially on the slopes nearest the Pacific.

The most notable timber is the Douglas Pine, which grows to an enormous size and furnishes the best masts for ships. This is largely exported.

Although the mountain peaks rise beyond the limit of perpetual snow, it is remarkable that few glaciers are to be found in the mountain valleys.

This is accounted for by reason of the moisture from the ocean being intercepted by the Coast and Cascade Ranges of Mountains; along the western slopes of the latter of which the greatest rainfall occurs.

Except in Vancouver Island and along the lower valley of the Fraser River, the land is not much cultivated, and is not yet opened up for settlement. The **Products** are cereals,—wheat, barley, &c.

The valleys of the Fraser and Upper Columbia are rich in gold; coal is abundant in Vancouver and Queen Charlotte Islands, and other valuable **Minerals** are found but are not yet worked.

The **Fisheries** are important; salmon abounds in the rivers; sturgeon, herring and halibut on the coast; and seals are numerous.

The **Eastern Part** of the Dominion has a more generally equitable climate than the western. Along the Atlantic Coast, it is moist but not subject to extremes, except in Labrador, where the Polar Current makes the winters long and severe, while the summers are short but warm (see p. 14).

From the **Lake of the Woods** to the **Atlantic Ocean** the country is covered with forests of pine, oak, spruce, cedar, and other woods, except where they have been cleared for settlement. In the peninsula between Lake Erie and Lake Huron, black walnut, chestnut, butternut, and oak are abundant; and further east—pine, hickory, cedar, basswood, beech, maple, and ironwood. As far as the extreme north of Labrador are to be found the spruce, poplar, balsam, birch, and aspen.

The climate and soil are well adapted for **Agriculture** and **Stock-raising**. The best variety of cereals, as well as root crops, flourish luxuriantly.

The principal agricultural products are wheat, barley, oats, potatoes and roots.

Minerals are largely distributed, although as yet they have not been much developed.

Iron is found in the Laurentian Hills, which extend from Lake Superior to the St. Lawrence River; north of Lake Ontario; and in the Coburg Mountains; copper on the shores of Lakes Superior and Huron; silver on the north shore of Lake Superior; gold in the Peninsula of Nova Scotia; coal in Cape Breton Island, in Nova Scotia, and generally throughout the Atlantic slope; gypsum in Nova Scotia and in the peninsula of Southern Ontario; phosphates in the limestone of the Laurentian Hills; petroleum and salt in the peninsula between Lakes Huron and Erie; besides marble, plumbago, mica, and other valuable minerals.

The **Notable Animals** of Eastern Canada are the moose and the cariboo deer. Fur-bearing animals are numerous—the bear, beaver, otter, mink, and many others, and seals on the coast of Labrador.

Fish bound in the Gulf of St. Lawrence; off the eastern coast; in the Great Lakes and in the rivers; cod, herring, mackerel, haddock, and lobsters are largely taken in the Gulf of St. Lawrence and off the eastern coast; salmon in the rivers reaching tide-water; white-fish and salmon trout in the Great Lakes.

The **Central Part** of the Dominion in the prairie region or Fertile Belt has a climate which differs greatly from that of the west or east.

In summer the heat is equal to that of the most southerly part of the country, but in winter the cold is intense, the thermometer often falling to 40° below zero.

As the rainfall on the prairies is too small to support tree-life, a remarkable provision of nature occurs, by which, the surface of the land being of a loose, porous nature, resting on a substratum of clay, becomes frozen to a depth of six or eight feet. The summer heat thaws the surface and gradually penetrates the ground, and the escaping moisture rising to the surface supplies the roots of the growing crops with abundant nourishment.

The Cascade and Rocky Mountains absorb nearly all the moisture from the winds of the Pacific, and the climate is therefore very dry, so that cattle can graze out all winter as far north as the Peace River and west to the Rocky Mountains.

Near the Rocky Mountains the country is subject to **Variable Winds**—cold winds from the summits of the mountains which bring summer frosts, and the warm **Chinook Winds** in winter which seem to sweep round the northern extremity of the mountains from the Pacific Ocean, and in a very short time melt all the snow from the ground. These changes are often sudden, and the thermometer at Fort Edmonton has fallen from 47° above zero to 13° below within twelve hours.

The **Principal Products** are wheat and root crops.

The **Prairies** in summer are generally covered with wild roses and other prairie-flowers, but it is only in the river valleys that timber is found, chiefly balsam and poplar. North of the prairie region the spruce, larch, canoe-birch, balsam, poplar, aspen and Banksian pine grow almost as far north as the mouth of the Mackenzie River.

The **Coal Region** between the Athabasca and Red Deer Rivers near the Rocky Mountains is supposed to cover an area of not less than 25,000 square miles. Coal is also found in the south near the Souris River and in other parts.

North of the Athabasca River is the desolate **Arctic Plain**, extending from the Rocky Mountains to Hudson Bay on the east, and to the Arctic Ocean on the north. Here the only settlements are the Hudson Bay Forts, established for the collection of furs; and the only inhabitants are a few Indians, and in the far north the Esquimaux.

Labrador, and the territory east of Hudson Bay, is chiefly valuable for the seal fishing on the Atlantic coast. The southern part is wooded and is inhabited by Indians, but the northern part is desert and is almost uninhabited.



INDIAN ENCAMPMENT IN THE NORTH-WEST.

POLITICAL CANADA.

The Political Divisions of the Dominion of Canada are:—

ONTARIO.

BRITISH COLUMBIA.

QUEBEC.

NEW BRUNSWICK.

NORTH-WEST TERRITORIES—

NOVA SCOTIA.

Athabasca.

PRINCE EDWARD ISLAND.

Alberta.

MANITOBA.

*Saskatchewan.**District of Keewatin.**Assiniboina.*

In addition to the Territories already laid out in the North-west, there is a vast tract of land both east and west of Hudson Bay not yet organized.

The Population in 1881 was nearly 4,500,000, and each year it is being largely increased by immigration from Europe. Of this number over 4,000,000 are in the eastern part of the country.

In the Province of Quebec the people are chiefly French, descendants of the early settlers from France, and still speak the French language. In the other provinces, they are mainly of British descent, or immigrants who have come from Great Britain, Germany and other countries.

The Indians throughout the Dominion are supposed to number about 130,000, and the Chinese (chiefly in British Columbia) about 5,000.

Agriculture and **Lumbering** are the leading industries on land, and the **Fisheries** on both the east and west coasts.

Grazing is also an important occupation in the agricultural districts.

In the North-West, great attention is given to the raising of cattle, and large ranches or pasture limits have been formed on the prairies near the Rocky Mountains.

The Agricultural Products exported amount to about 35,000,000 dollars annually; Cattle and Timber each to about 25,000,000 dollars. The value of the products of the Fisheries amounts to about 17,000,000 dollars annually.

The **Principal Districts** for agriculture are:—Ontario for wheat, oats and barley; Manitoba for wheat and roots; Prince Edward Island for oats and potatoes. For timber:—the northern part of Ontario, Quebec, New Brunswick, and British Columbia. For the fisheries:—Nova Scotia, New Brunswick, Prince Edward Island, Quebec, and British Columbia.

The **Fisheries** are invaluable as a training school for seamen as well as for the product they return.

In the West salmon-canning is an important industry; and seal-skins are largely exported.

In the East, the curing of cod-fish and lobster-canning form large industries in Prince Edward Island and on the southern shore of the Gulf of St. Lawrence. These, with the salmon from the rivers, form important articles of export.

Mining is also an important industry, but has not yet received the attention it deserves.

The **Manufacturing Industry** has grown immensely within the last few years. Its principal seat is in the larger cities, and on the banks of rivers or canals, where water power is abundant. The principal manufactures are cottons, woollens, agricultural implements, flour and lumber.

The **Commerce** of Canada is of two kinds—domestic and foreign. The **Domestic Commerce** is the distribution within its own limits of domestic manufactures and imported articles in exchange for agricultural, grazing, mining, forest and water products.

To carry the freight, passengers and mails for the inland, coasting, and foreign trade, an immense fleet of steamers and sailing vessels is employed, and Canada ranks among the first nations of the world for the extent of her shipping.

The principal **Interior Water Route** for Canadian commerce is by the Great Lakes and the St. Lawrence River to the Atlantic Ocean.

This, although passing mainly through Canadian territory, is allowed also to be used by the vessels belonging to the United States.

The difficulties of this route are overcome by canals—at Sault Ste. Marie between Lakes Superior and Huron; the Welland Canal between Lakes Erie and Ontario, past Niagara Falls; and several smaller canals on the St. Lawrence River between Lake Ontario and Montreal.

As the St. Lawrence River is closed by ice for five months in the winter, this route can only be used in the summer season, when Montreal and Quebec are the shipping ports. In winter, Halifax in Nova Scotia, connected by the Intercolonial Railway with Montreal, and Portland in Maine (U.S.) connected by the Grand Trunk Railway, then become the sea-ports.



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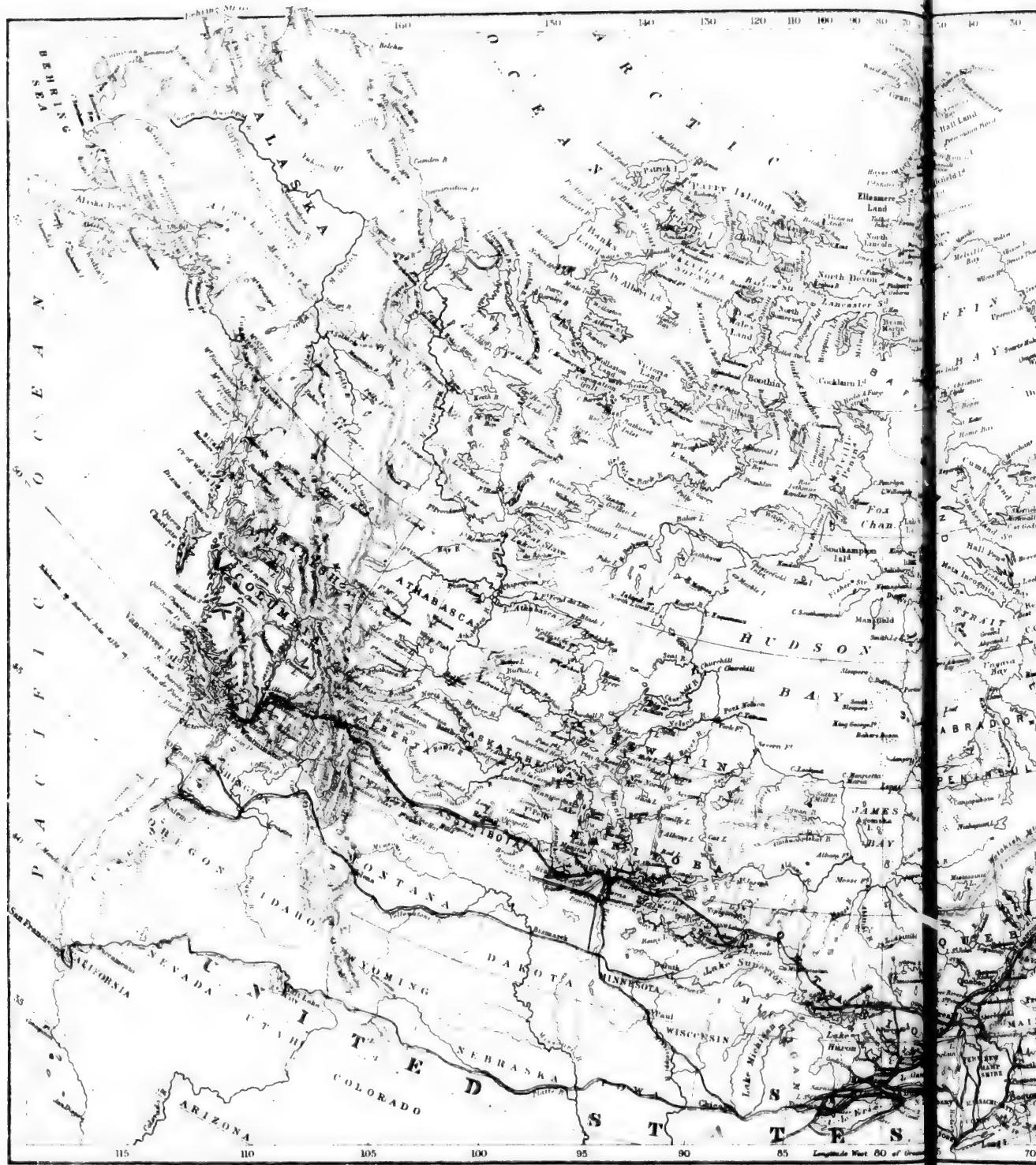
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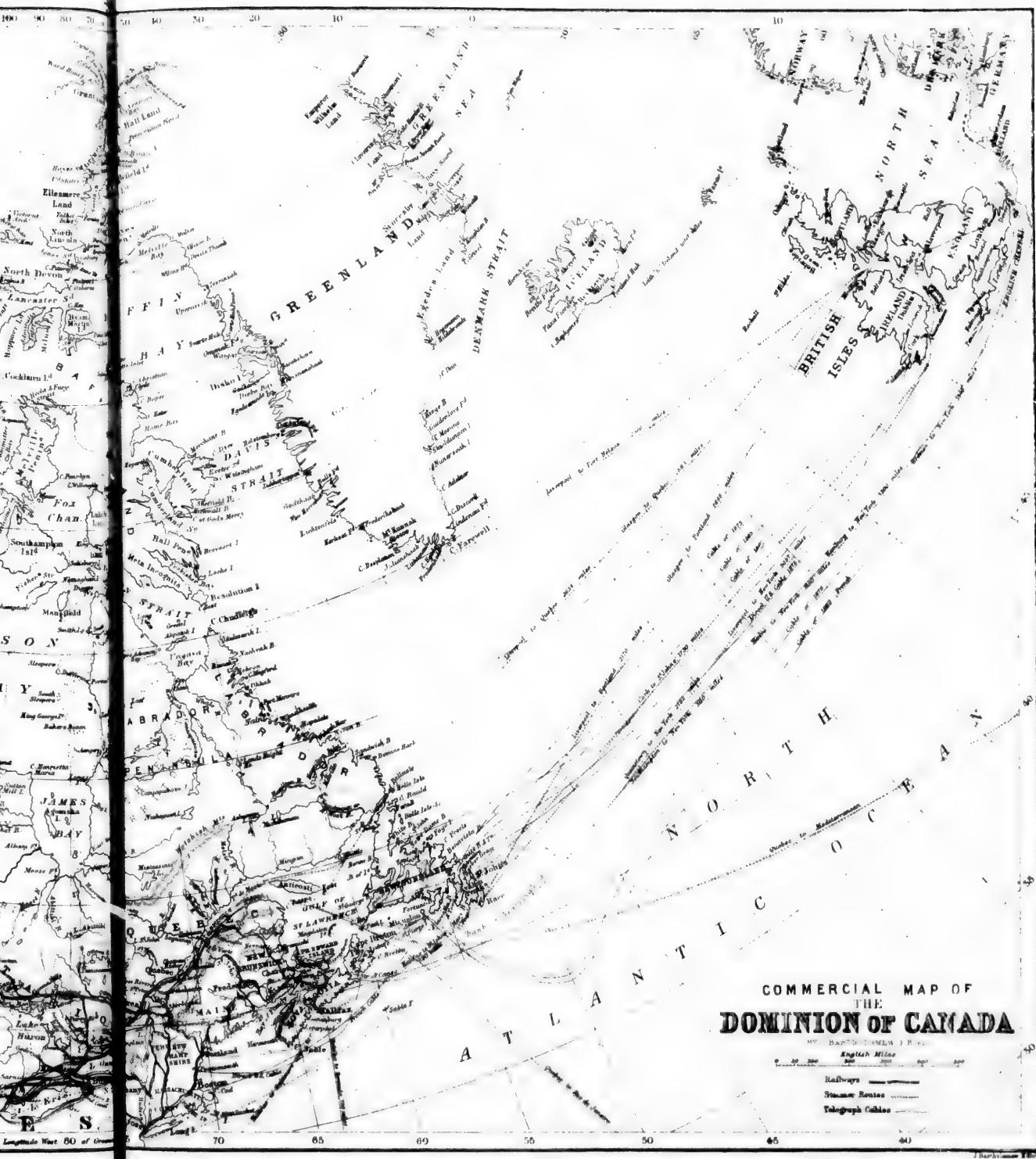
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Other Routes of less importance are.—By the Ottawa River from Ottawa to Montreal; the Rideau Canal between Ottawa and Kingston on Lake Ontario; the Richelieu River with the Chamby Canal, connecting the St. Lawrence with Lake Champlain in the United States; the St. John River in New Brunswick; the Saskatchewan River in the North-west, and the Fraser River in British Columbia.

The principal interchange of commodities between the provinces are manufactured articles—cottons, woollens, boots and shoes, and agricultural implements—from Ontario and Quebec to the other provinces; flour from Ontario to New Brunswick and Nova Scotia; coal, fish, and West India produce from Nova Scotia and New Brunswick to Quebec and Ontario. In addition to this trade, all the important cities are centres for the distribution of imported goods.

At the entrance of harbors, on capes and on dangerous shoals of the lakes and on the ocean, the Dominion Government maintains light-houses to guide and warn mariners at night.

* The **Railway Routes** are much more numerous and complicated.

The principal trunk lines running through Canada are:—

The **Canadian Pacific** (only partially constructed) between Montreal and Victoria, Vancouver Island, with various branches.

The **Grand Trunk**, between Portland on the Atlantic coast in the United States, and Chicago on Lake Michigan, with its numerous connections.

The **Intercolonial** between Halifax and Quebec.



SNOW-SHED ON THE INTERCOLONIAL RAILWAY.

The **Canada Southern** between Buffalo and Detroit.

The **Ontario & Quebec**, including the **Credit Valley Road**, from Ottawa to St. Thomas, connecting with lines to Montreal and Quebec.

The **Northern & North-Western**, from Toronto and Hamilton (with branches), to be continued to Lake Nipissing.

Besides these are many minor lines extending from Halifax, St. John, Quebec, Montreal, Toronto, and other places.

The number of miles of railway now in operation is 7,530, and of those in course of construction, 3,728, so that before long there will be over 11,000 miles of railway in the Dominion.

A complete net-work of telegraph lines covers the country and connects with the United States and with the Atlantic submarine cables to Great Britain *via* Newfoundland and Ireland, and to France *via* Massachusetts and the Island of St. Pierre, near Newfoundland. The number of miles now in use is upwards of 23,000, exclusive of the railway telegraphic lines.

Foreign Commerce is the exchange of commodities between different countries.

The foreign commerce of Canada is chiefly with Great Britain and the United States; and to a very much smaller extent with Newfoundland, the West Indies, France, and South America.

The principal **Exports** are wheat, barley, peas, cattle, timber (logs and sawn lumber), and fish. The **Imports** are chiefly manufactured goods from Great Britain and the United States, colonial produce (coffee, sugar, molasses, rice, tea, etc.), and raw materials (iron, cotton, etc.) for manufacture.

The greater part of the foreign commerce centres in the east, in the seaports of Halifax, St. John, Quebec, and Montreal; sea-going vessels cannot ascend the St. Lawrence River beyond Montreal; in the west, in Victoria, Vancouver Island.

Numerous lines of large steamships run between Montreal, Halifax and St. John to Liverpool, Glasgow, Antwerp, Havre, Bermuda, the Mediterranean, and South America.

A large proportion of the railway traffic from Ontario, and of the lake traffic in summer, is between Ontario and the United States.

Grain is received in bulk and is lifted into elevators by buckets running on an endless chain, and operated by powerful steam machinery. It is afterwards emptied into the holds of vessels by means of spouts. When grain is shipped in ocean-going vessels it is usually packed in bags.

Timber is loaded on ships through ports in the stern; these are afterwards tightly closed before the vessel goes on her voyage.

Cattle are carried by the railways, chiefly to Montreal, and are there shipped on the ocean steamers to Europe.

Timber is usually rafted to Quebec by the St. Lawrence River, and carried to Europe in sailing ships; sawn lumber is shipped by sailing vessels and barges, chiefly to the United States, and from the Atlantic Provinces to the West Indies and South America.

GOVERNMENT.

The **Dominion of Canada** consists of a Confederation of various Provinces and Districts, united under one General Government and subject to the British Monarchy.

The **General Government** is in principle similar to that of Great Britain, a Limited or Constitutional Monarchy, that is, the power of the Monarch, or in the case of Canada, of the Governor-General, is limited or defined by the Constitution.

The **Constitution** of the Dominion is the agreement between the people of Canada and the Sovereign of Great Britain, embodied in an imperial act called the "British North America Act of 1867." This forms the basis of all legislation, but may be varied with the consent of all parties concerned.

The **General Government** is composed of the representative of the British Crown—the Governor-General, and a Parliament in which the people are represented.

Each Province has its own separate Local Government based on the same principle as the General Government.

The **Governor-General** of Canada is appointed by the Imperial Government, and holds office during pleasure.

He performs similar duties as by the Constitution of England devolve upon the Sovereign. He summons or dissolves the Commons, chooses new Ministers, appoints Senators, gives or refuses his assent to any Act, appoints Judges and Lieutenant-Governors to the Provinces, disallows Provincial Acts, besides performing other duties. All his acts, although in the name of the Sovereign, are done by advice of his Ministers, who are virtually responsible to the Parliament of the country.

The **Parliament** is composed of the **Governor-General**, representing the Crown; the **Senate**, composed of Members appointed for life by the Crown, and not exceeding seventy-eight in number; and the **Commons**, numbering, according to the Census of 1881, 211 members, elected by the people for one Parliament, which cannot last for more than five years.

DOMINION OF CANADA.

A Senator must be at least thirty years of age, be a British subject, be worth \$1,000 or upwards, and reside in the Province for which he is appointed, unless he is a Minister of the Crown. He may forfeit his seat for not possessing any of these requirements, or upon being convicted of crime, or for absence from Parliament during two consecutive sessions.

The House of Commons is the chief power in Parliament, and the Ministers of the Crown are usually chosen from its members, although members of the Senate are equally eligible. No qualification is required except that a member should be a British subject.

The number of members of the House of Commons is based upon the population, as shown by the census taken every ten years. The number from Quebec is always limited to sixty-five, and the other Provinces are allowed a proportionate representation.

Every person in Canada twenty-one years of age has a vote, provided he is entered on the voters' list as the owner of real estate of specified value, or if he is assessed on an income of at least \$400. The only exceptions are officers of the Crown, who have no vote.

As in England, Parliament entrusts the Government of the country to a select few, who are known as the **Ministry**, or the **Queen's Privy Council for Canada**. The **Premier** or Prime Minister is the chief of the Ministry.

The Ministry have the real power over the country in their hands, but all the members must also be members of Parliament, and they are responsible to Parliament for their acts. If they fail to satisfy the members in the management of affairs, so that a majority of the House of Commons dissents, the Ministry are required to resign, and the Governor-General appoints another Prime Minister who forms a new Ministry, or he may dissolve the House and order a new election.

No Act can become law without the consent of Parliament, so that while in theory the country is ruled by the Crown, in practice it is ruled by the people through their representatives, who have again delegated their powers to the Ministry, subject to approval.

Certain Acts which may be considered doubtful, but which are passed by the local governments, may be reserved for the decision of the General Government, and those of the latter may be also reserved for the decision of the British Government, and if considered contrary to the Constitution they may be disallowed.

The Parliament of the Dominion provides for the peace, order, and good government of Canada in all matters not specially assigned to the Legislatures of the Provinces.

The Legislatures of the Provinces provide for all local matters.

As the Ministers are the representatives of Parliament, they are responsible for all Acts passed. This is called the **Legislative Function** of the Government.

The Ministry are also responsible for the carrying out of such laws as are passed by the Parliament. This is called the **Executive Function**, and is of two kinds, the **Judicial** and the **Administrative**.

The **Judicial** consists in the establishment of Courts and the appointment of Judges, who are the interpreters of the law.

The **Administrative** is to see that the laws made by Parliament are properly carried out. This is done by the officers of the Courts or by the officers of the various departments of State.

In the Dominion Government there are thirteen departments, each presided over by a Minister of the Crown.

There are therefore three **Duties** to be performed by the Government: the Legislative - task of making the laws; the Judicial, or duty of explaining them; and the Administrative or duty of carrying them into execution.

The General Parliament meets annually at Ottawa by order of the Governor-General (through his ministers).

Each House has its own Speaker, and he presides over its deliberations.

Any member can introduce a measure, but a Bill must be passed by both Houses and receive the Governor-General's assent before it can become law. The Commons retain the right to control the finances of the country, and should the Governor-General refuse his consent to any Bill passed by the House, they can refuse to vote the supplies to carry on the Government.

Each of the Provinces has its own **Local Legislature**, with power to deal with certain subjects specified in the British North America Act.

These subjects may be said to consist generally of all matters of a purely local or private nature. Within these limits, the Local Governments are supreme; with all other matters the Central Government at Ottawa deals.

The Provincial Legislatures in Quebec, New Brunswick, Nova Scotia and Prince Edward Island are composed of two Houses—a **Legislative Assembly** and a **Legislative Council**; in Ontario, Manitoba and British Columbia, of a **Legislative Assembly** only.

The Legislative Assembly corresponds to the Dominion House of Commons, and the Legislative Council to the Senate.

The members of the Legislative Assemblies are elected every four years by the votes of the people.

Each Province is presided over by a **Lieutenant-Governor**, and has a **Ministry**, in all respects resembling that of the General Government but on a smaller scale. The powers and duties of the Lieutenant-Governor, Ministry and Parliament are the same as those of the Dominion Government.

The Ministry of Ontario consists of six members, the Attorney-General, the Minister of Education, the Commissioner of Crown Lands, the Commissioner of Public Works, the Provincial Treasurer and Commissioner of Agriculture, and the Provincial Secretary and Registrar.

The **Legislative Assembly** of Ontario consists of eighty-eight members, representing the different electoral districts into which the Province is divided.

The **North-West Territories** have their affairs administered by a Lieutenant-Governor and a Council of five, under the direction of the Dominion Government. As soon as districts of 1,000 square miles contain a population of 1,000 persons, they are to be constituted electoral districts and can return a member.

The **District of Keewatin** is under the control of the Lieutenant-Governor of Manitoba.

The General Government collects the **Customs** and **Excise Duties**, and, generally speaking, has the control of the finances of the Dominion.

To each of the Provinces a **Subsidy** is paid according to the number of the population. The annual subsidies now amount to \$3,606,672, divided as follows:—

Ontario.....	\$1,190,872.86
Quebec.....	959,252.80
New Brunswick.....	450,974.21
Nova Scotia.....	393,753.01
P. E. Island.....	104,674.07
Manitoba.....	227,153.61
British Columbia.....	207,995.66
TOTAL.....	\$3,606,672.61

In no country in the world is more attention given to **Education** than in Canada. In each of the Provinces there are numerous Public Schools (*free to all*), High Schools and Colleges, under the control of the local governments; besides many denominational colleges and schools.

In Ontario the educational system is presided over by a **Minister of the Crown**, and in the other provinces by a **Chief Superintendent**.

There is no established **Religion** in Canada, all denominations having equal privileges.

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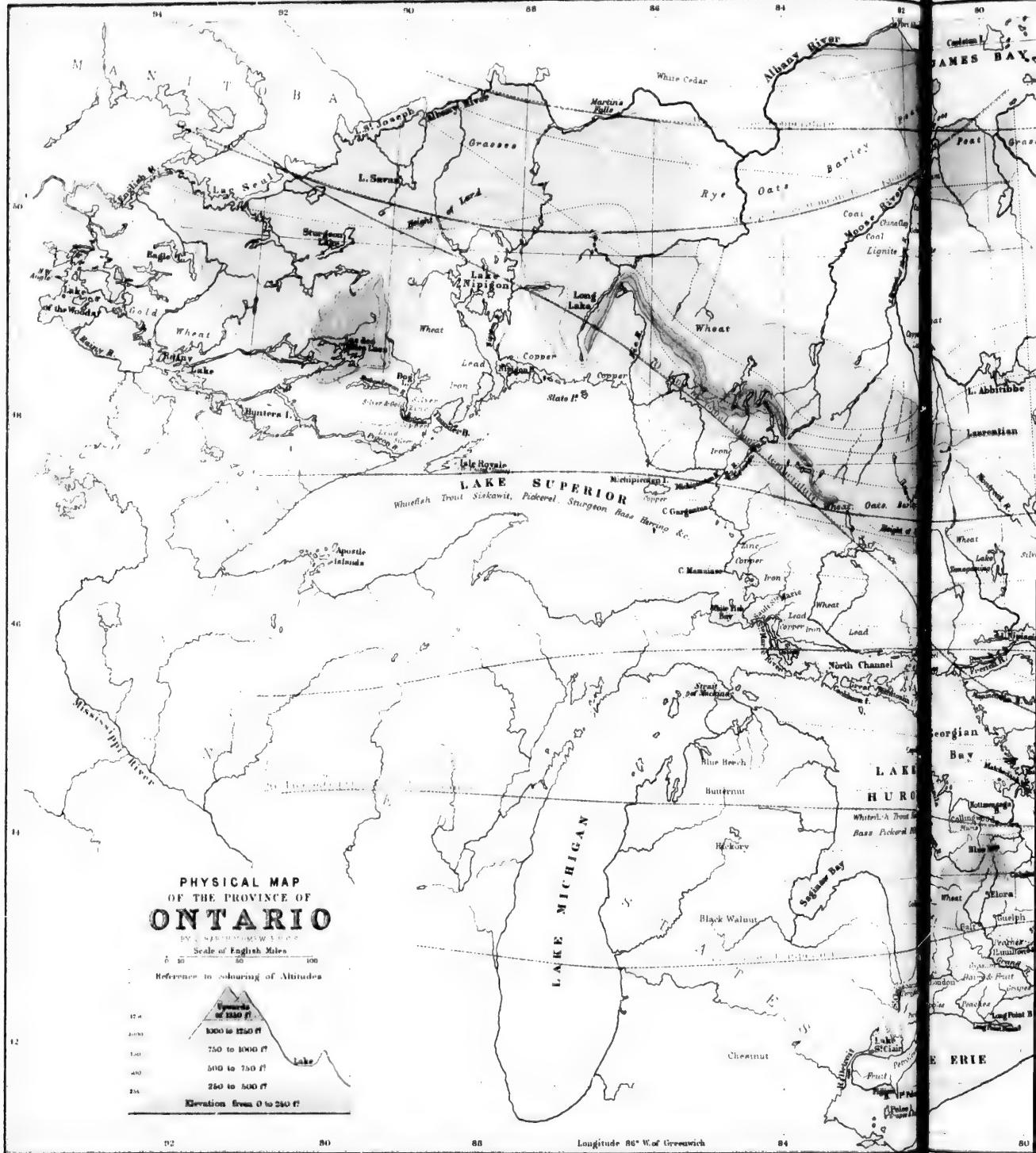
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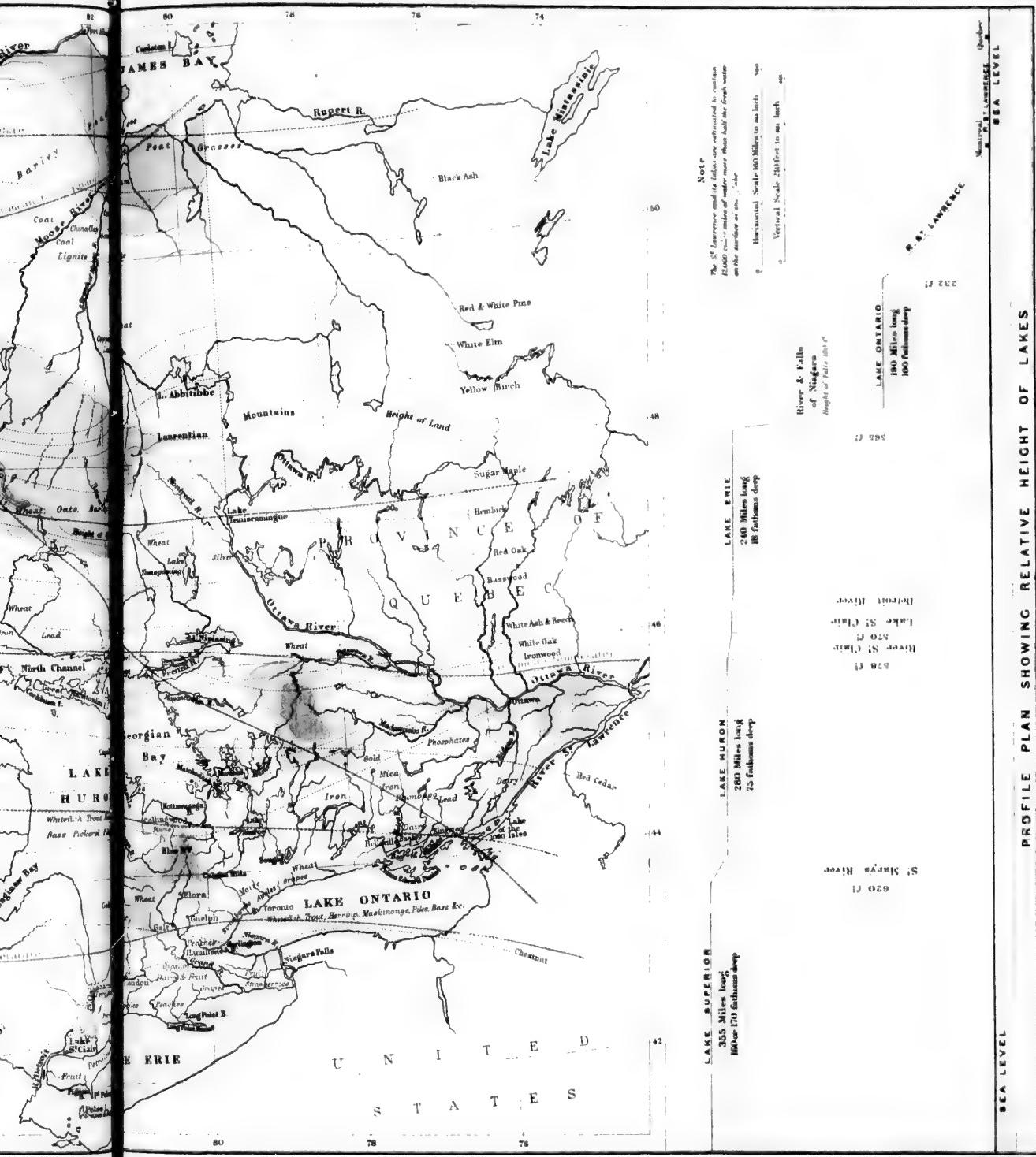
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ONTARIO.

QUESTIONS ON THE PHYSICAL MAP OF ONTARIO.

Outlines.—What river forms the eastern boundary of Ontario? The north-eastern? What meridian forms the eastern boundary in the northern part of the Province? Between what waters does it extend? What Great Lakes are south of Ontario? What is the outlet of Lake Ontario called? What peninsula extends into the east of Lake Ontario? What bay nearly separates it from the mainland? How is Lake Ontario connected with Lake Erie? Lake Erie with Lake Huron? What large bay is in the east of Lake Huron? In the west? To what country does the latter belong? What islands are in the north of Lake Huron? How is Lake Huron connected with Lake Michigan? Does any part of Lake Michigan border on Ontario? How is Lake Huron connected with Lake Superior? What falls occur on the St. Marie River? On the Niagara River? What islands are in Lake Superior? To what country does Isle Royale belong? What rivers and lakes form the boundary between Ontario and the United States from Lake Superior westward? What meridian nearly forms the western boundary between Ontario and Manitoba? From what point on the Lake of the Woods does it extend? What river forms the north-western boundary of Ontario? What lakes does it form in its course? Into what water does it flow?

Highlands, Lowlands, and Drainage.—Where are the greatest heights of land in Ontario situated? What direction does the north-western height of land take? Into what river do its northern waters flow? What lake is near the highest point? What large lake is east of Lac des Mille Lacs and north

of Lake Superior? What river drains Lake Nipigon? What river flows into Thunder Bay? What rivers into James Bay? What river into the north-eastern part of Lake Superior? Into the north-eastern part of Lake Huron? What lakes does the French River drain? What mountains are on the north coast of Lake Huron? What hills are on the south shore of the Georgian Bay? Between the Georgian Bay and Lake Erie? What lake is between the Georgian Bay and Lake Ontario? In what direction and by what outlet do its waters flow? What river flows from the height of land south of the Georgian Bay into Lake Erie? Into Lake St. Clair? Into Lake Huron? What rivers flow from the eastern height of land into the Bay of Quinté? Into the Georgian Bay? Into the Ottawa River? What tributary flows into the Ottawa River near Ottawa? Of what river is the Ottawa a tributary?

Where are the two lowland districts? What height is Lake Ontario above the sea? Lake Erie? Lake Huron? Lake Superior? Lake Nipigon? Lake Nipissing? Lake Simcoe? Lac des Mille Lacs?

Climate and Products.—What do the red lines show? What line shows the greatest variation? What mean annual temperature has Lake Ontario? Lake Superior? Lake Nipissing? What do the blue lines show? What trees grow farthest south in Ontario? Name the trees of Ontario in their order from the chestnut northward? Which are the principal districts for wheat? Barley? Maize? Fruit? Cattle? Dairy products? Petroleum? Salt? Gypsum? Iron? Mica? Phosphates? Plumbago? Copper? Silver? Lead? Zinc? Nickel? What fish are caught in Lake Ontario? Lake Erie? Lake Huron? Lake Superior?

GENERAL DESCRIPTION.

Ontario occupies the most southerly part of the Dominion of Canada, and from its position, bordering on the Great Lakes, St. Lawrence and Ottawa Rivers, is the centre of the inland commerce of the Dominion.

In wealth, products, manufactures, and general business, Ontario is the most important Province of the Dominion.

In Extent, Ontario ranks fourth among the Provinces, not taking the unorganized Provinces of the North-West into consideration, but in Population it is first.

The Surface is generally flat, or undulating, sloping eastward

towards the St. Lawrence River, and northward towards Hudson Bay.

In no part of the Province is there an elevation more than 1,500 feet above the level of the sea. Some small Heights of Land occur, which form water sheds for the numerous small rivers and lakes, which abound in the country.

The range of the Laurentian Hills extends from the west along the north shore of Lake Superior into the Province of Quebec, and, at a lower elevation, a spur extends towards the eastern end of Lake Ontario. These form the principal highlands of the country.

Nearly all the Mineral Wealth of Ontario is found in the Laurentian Hills.

In the west—silver, copper, zinc, nickel, and lead; in the east—iron, phosphates (used for fertilizing the land), mica, and plumbago.

In the Southern Peninsula, salt, petroleum and gypsum are found.

The **Rivers** are numerous, but, with the exception of the Ottawa and St. Lawrence, are short and not available for navigation, owing to the physical formation of the country (*see p. 29*). They are valuable to the lumbermen in floating timber and logs to a shipping point, and also for the water-power they afford.

Logs are floated down the rivers and are gathered together within *booms* (enclosures formed by long pieces of timber chained one to the other); they are then towed in these booms by steamers across the lakes to the saw-mills. Square timber, when brought by rail or water to a navigable point, is formed into drams, or small rafts tightly bound together; a number of these drams are joined together and form rafts which are towed through the Great Lakes and then floated down the St. Lawrence to Quebec; in going through the rapids of the St. Lawrence each dram is taken down separately.

No country possesses more numerous **Lakes** in proportion to its extent than Ontario, but they are generally small, although many of them are navigated by steamers.

The principal are—**Lake of the Woods**, **Nipigon**, **Nipissing**, **Simcoe**, **Scugog**, and the **Muskoka Lakes**.

The **Soil** is fertile and well adapted for the cultivation of the principal cereals and fruits of the Temperate Regions, as well as for the raising of cattle.

In the south fruits are abundant, but in the north and west the country is still covered to a great extent with vast forests of pine, hemlock, cedar, birch, beech, maple, basswood, and other woods. In the extreme south are forests of black walnut, chestnut, oak, and other hard-wood trees, valuable for cabinet work.

The **Climate** is healthy, and although subject to extremes between winter and summer, is modified by the influence of the great bodies of water in the Great Lakes (*see p. 14*).

The chief **Industries** of the country are agriculture, stock-raising, and lumbering.

Lumbering is chiefly carried on in the districts adjoining the Georgian Bay, and thence west to the Ottawa River.

The principal **Exports** are wheat and barley, mainly to the United States; flax to the Maritime Provinces; sawn lumber and cattle to the United States; square timber, cattle, and wheat to Great Britain.

The total annual value of the direct exports amounts to about \$33,000,000 dollars; consisting of: grain, 13,500,000; lumber, 8,000,000; cattle, 6,500,000; manufactures and other articles, 5,000,000 dollars; but as a large amount is shipped through the ports of Montreal, Quebec, Halifax and Coaticook (*for Portland, Me.* See *p. 53*), these figures should be largely increased.

Manufactures are carried on to a considerable extent, chiefly of articles for domestic consumption—cottons, woollens, boots and shoes, agricultural implements, machinery, and wood-work.

Ontario is divided into **Forty-four Counties** and **Five Districts**, which may be divided into seven sections—nine counties and districts bordering on Lakes Superior and Huron; six bordering on Lake Erie; seven Central Counties in the South-western Peninsula; eleven bordering on Lake Ontario; six on the St. Lawrence; six on the Ottawa; and four Central Counties between the Ottawa and Lake Ontario.

Each County is subdivided into **Townships** for local purposes only, and is governed by a County Council. Each Township elects a Reeve, and according to population one or more Deputy Reeves. These form the County Council, and from the members they elect a Warden or President.

QUESTIONS ON THE POLITICAL MAP OF ONTARIO.

What province of Canada adjoins Ontario on the north-east? How is it separated from Ontario? What country is south of Ontario? How is it separated from Ontario? What state is south-east of Ontario? West of Lake Huron? What states south of Lake Erie? (*See Map of the United States.*) South of Lake Superior? South of the Lake of the Woods? What province of Canada adjoins Ontario on the north-west?

From some parts of these Counties **Parliamentary Ridings** or **Electoral Divisions** have been formed, these are for the election of members to the House of Commons, or to the Provincial Assembly, but the townships of which they are composed still form part of the original counties for municipal and other purposes. **Bothwell**, **Monck** and **Cardwell** are Parliamentary Ridings; **Haliburton** is a county for municipal purposes only.

Toronto, the capital, on Lake Ontario, is the largest city and the principal seat of manufactures, commerce and education in the Province; it contains the Parliament Buildings, Provincial University, Normal School, Osgoode Hall (the Law Courts), and many other important public buildings.

Ottawa, the capital of the Dominion, is beautifully situated on the Ottawa River, just below the Chaudière Falls (*see Illustration, p. 35*). It contains the Dominion Parliament Buildings and Departmental Offices, and, from its position and valuable water-power, is an important centre of the sawn-lumber trade. It is connected by the Rideau Canal with Kingston. The Governor-General resides there at Rideau Hall.

Hamilton, on Burlington Bay, at the head of navigation on Lake Ontario, is the second city in size; it is an important manufacturing city and commercial centre.

Kingston, near the outlet of Lake Ontario, is the point where grain is transhipped from the lake vessels to barges, which are towed down the St. Lawrence and through the canals to Montreal. It is one of the oldest cities in Canada and was formerly known as Cataraqui (*Kah-ta-rak-kee*).

London, in the South-western Peninsula, is the centre of a valuable agricultural country, and is the chief city in the west.

St. Catharines is a considerable city and the centre for the manufactures carried on along the Welland Canal.

Guelph, **Galt**, **Dundas**, **Brantford** and **Chatham** are manufacturing towns. **Belleville** exports lumber and barley, chiefly to Oswego in the United States. **Brockville**, on the St. Lawrence, has a large local trade; **Peterborough** and **Lindsay** are centres for the lumber trade.

Port Hope and **Cobourg** are ports on Lake Ontario; **Owen-Sound** and **Collingwood** are ports on the Georgian Bay; **Port Dalhousie** and **Port Colborne** are the termini of the Welland Canal; **Sarnia**, **Windsor**, and **Amherstburg** are the termini of the Canadian railways, where they connect with the lines in Michigan to the Western United States.

Paris is the centre of the gypsum country; **Woodstock** and **Ingersoll** are centres for dairy products; **Goderich** for salt; **Petrolia** for petroleum.

Port Arthur, on Thunder Bay, is the most westerly port of Ontario, and is the connecting point between the Canadian Pacific Railway and the steamer lines to Collingwood, Owen-Sound and Sarnia.

Niagara, at the mouth of the Niagara River, was one of the first settlements and the ancient capital of Upper Canada (*Ontario*). It is now unimportant.

What district borders on Lake Superior? What is the chief town? What district is north of Lake Huron? What is the chief town? What district borders on the Georgian Bay? What is the chief town? What six counties border on the Georgian Bay and Lake Huron? What are their chief towns? What six counties border on Lake Erie? What are their chief towns? What seven central counties are in the south-western peninsula? What are their chief towns? What eleven counties border on Lake Ontario? What are

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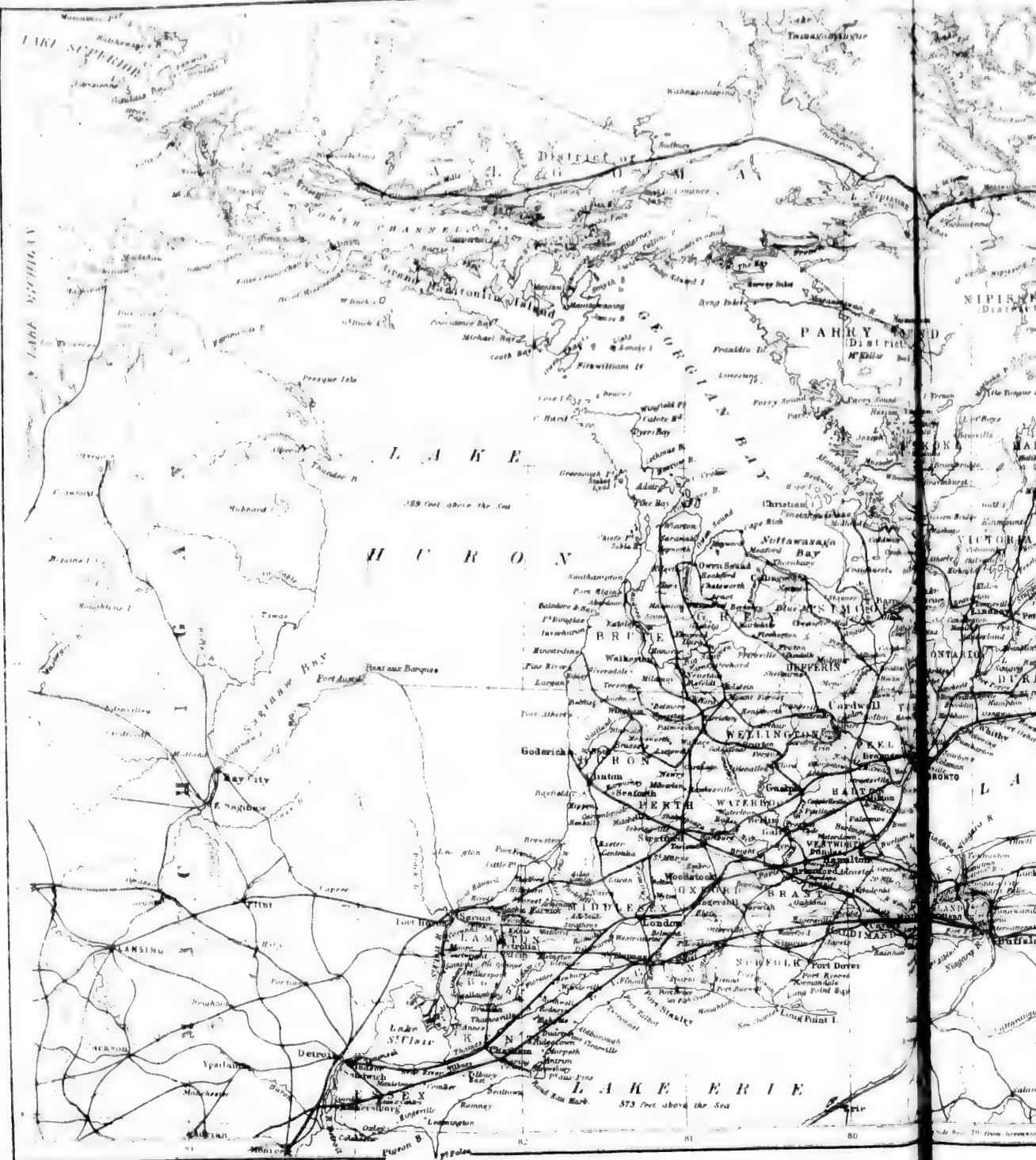
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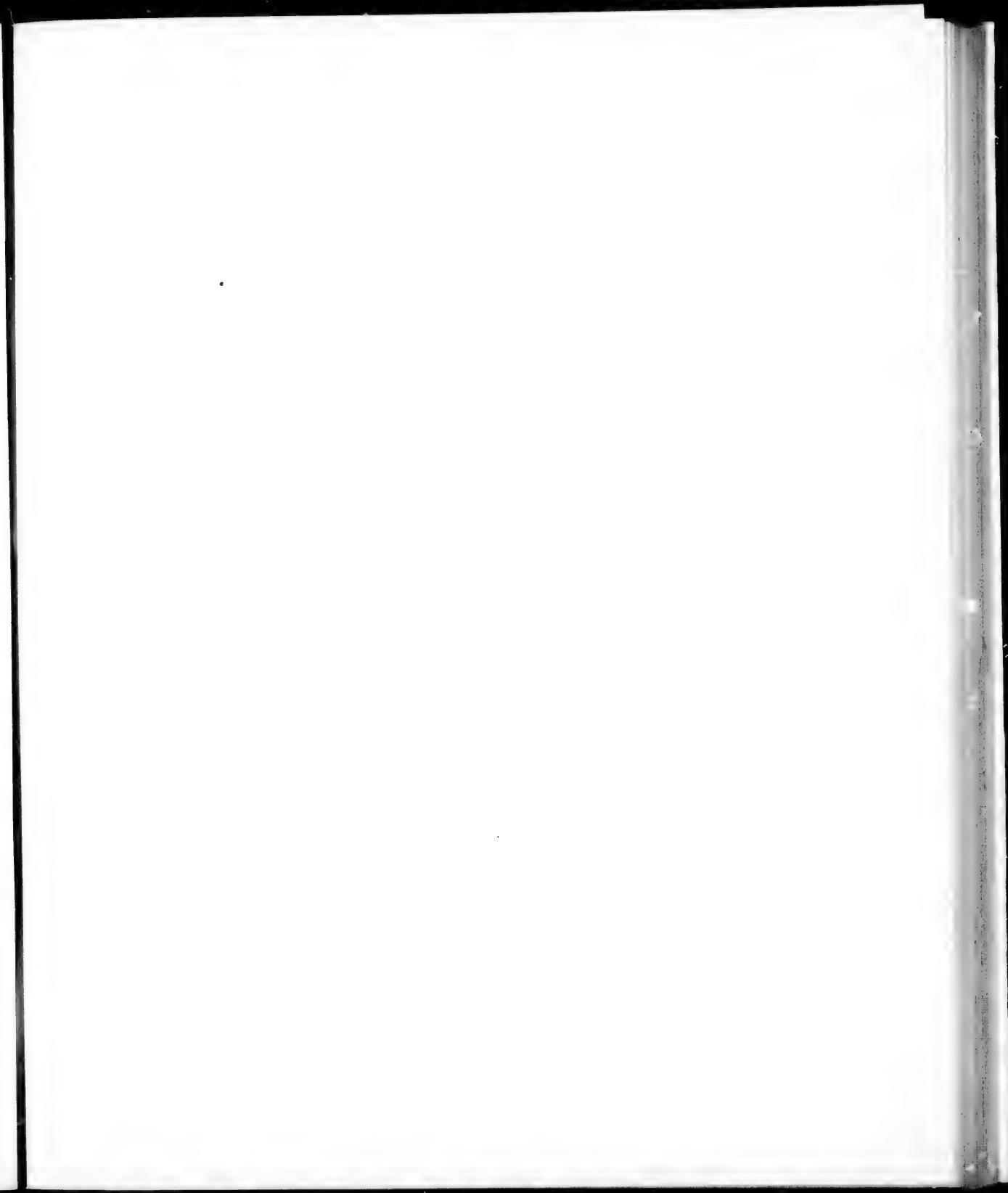
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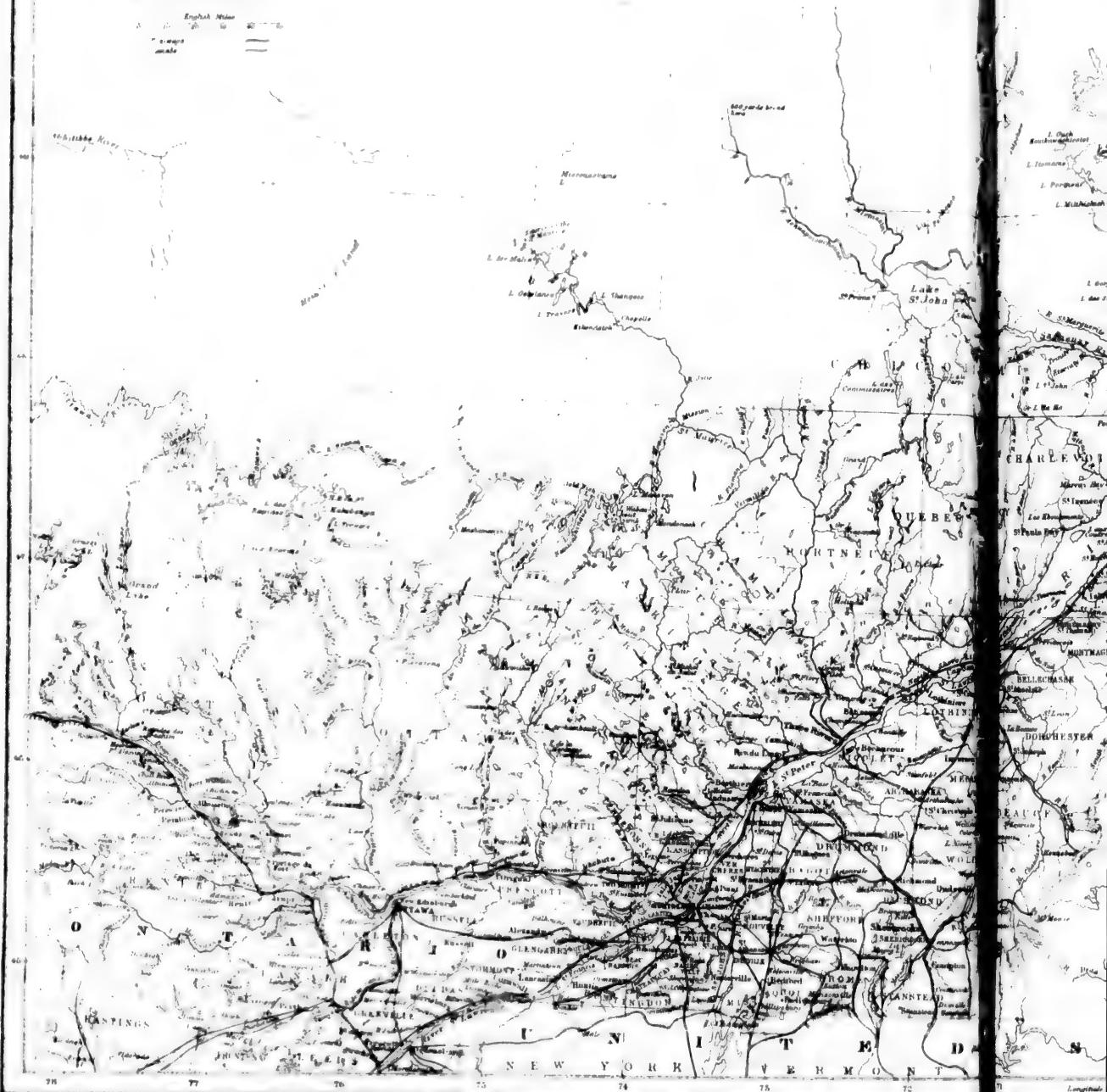


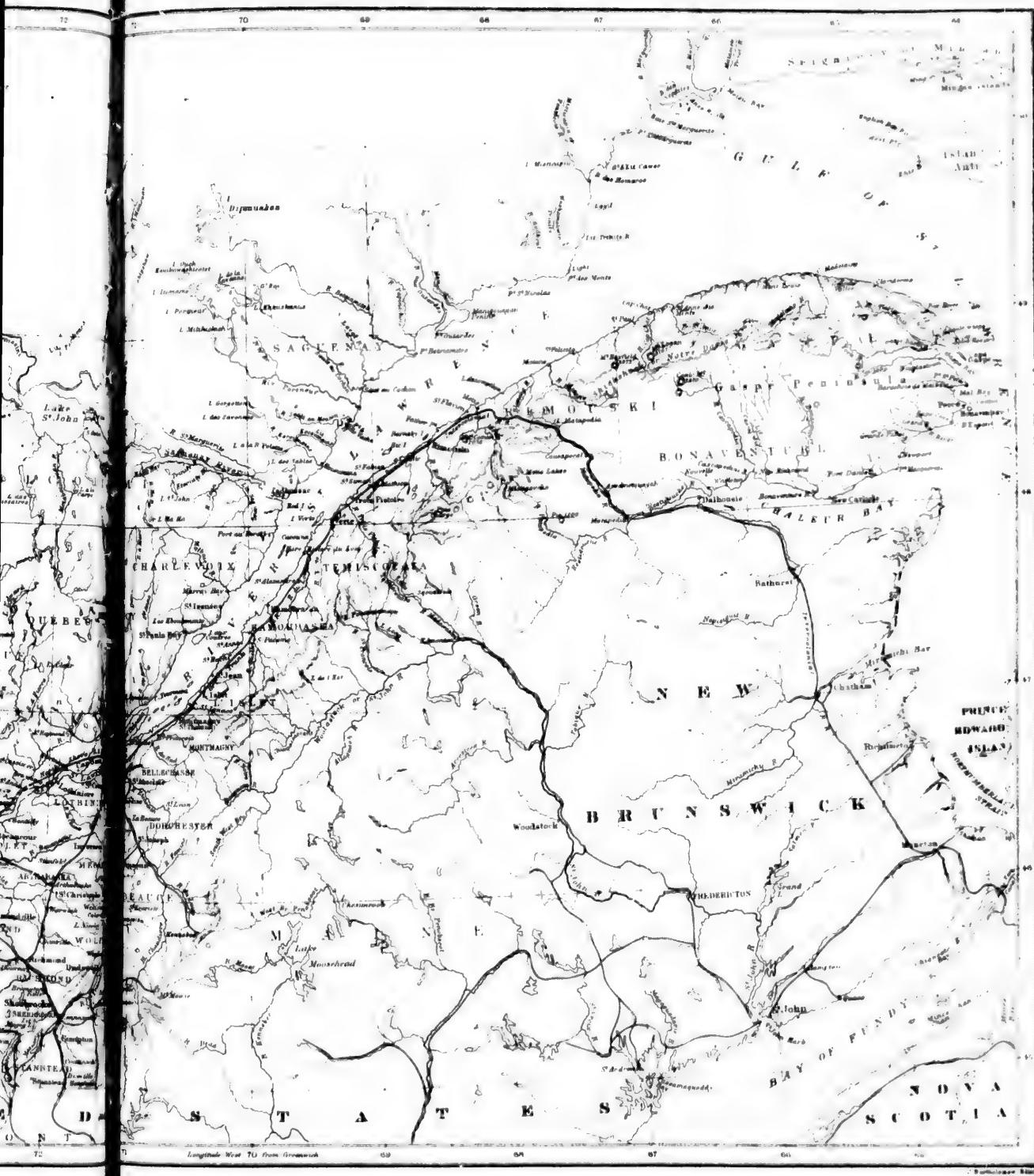






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REVIEW EXERCISES.

Islands.—*In what direction from the nearest land? By what water surrounded?*

Isle Royale? Michipicoten? St. Joseph? Manitoulin? Cockburn? Pelee? Amherst? Wolfe?

Peninsulas.—*From what part of Ontario does it project? Into what water, between what waters?*

County Bruce? Long Point? Prince Edward?

Capes and Points.—*From what part of the land does it project? Into what water?*

Mammanse? Gargantua? Hurd? Pelee? Long Point (*Lake Ontario*)?

Mountains and Hills.—*In what part of the country are they? In what county or districts?*

Laurentian? La Cloche? Blue? Caledon?

Bays.—*What coast does it indent? What counties or districts does it wash? Of what body of water is it an arm?*

James? Thunder? Nipigon? Michipicoten? Whitefish? Georgian? Nottawasaga? Matchedash? Pigeon? Long Point (*Lake Erie*)? Burlington? Quinte?

Rivers.—*Where does it rise? Through or past what counties or districts does it flow? Into what water?*

Albany? Moose? Abitibie? Rainy? Pigeon? Shebandowan? Kaministiquia? Nipigon? Ste. Marie? Michipicoten? French? Maganetewan? Severn? Saugeen? Manitou? St. Clair? Detroit? Thames? Madawaska? Rideau? Grand? Niagara? Trent? Moira? Ottawa? Petewawa? St. Lawrence?

Lakes.—*Where situated? What outlet has it?*

Lake of the Woods? Rainy Lake? Hunter's Lake? Seul? St. Joseph? Des Mille Lacs? Nipigon? Tamagaming? Temiscaming? Abitibie? Nipissing? Simcoe? Muskoka? Seugog? Thousand Isles? St. Clair?

Cities and Towns.—*In what county? On or near what water!*

Ottawa? Toronto? Hamilton? London? Kingston? St. Catharines? Guelph? Stratford? St. Mary's? Galt? Goderich? St. Thomas? Chatham? Port Hope? Cobourg? Peterborough? Lindsay? Port Arthur? Sault Ste. Marie? Parry Sound? Bracebridge? Barrie? Newmarket? Owen Sound? Collingwood? Orillia? Walkerton? Sarnia? Petroia? Sandwich? Windsor? Amherstburg? Bothwell? Port Stanley? Simcoe? Port Dover? Cayuga? Welland? Port Colborne? Dunnville? Port Dalhousie? Niagara? Dundas? Milton? Brampton? Bolton? Whitchurch? Picton? Napanee? Bath? Brockville? Prescott? Morrisburg? Cornwall? Alexandria? L'Original? Russell? Perth? Pembroke? Matawan? Minden? Belleville? Orangeville? Elora? Berlin? Preston? Woodstock? Ingersoll? Brantford? Paris? Strathroy?

QUEBEC.

QUESTIONS ON THE MAP.

(See also Map of the Dominion.)

What province of Canada is south-west of Quebec? What river forms the boundary? What territory is north-west? What land is north-east? What province adjoins Quebec on the east? What country? Which of the United States? What mountains are on the northern boundary? On the northern bank of the St. Lawrence? On the southern? Which is the great central river of Quebec? Which are the three principal tributaries of the St. Lawrence on the north? Through what lake on the border of Ontario does the Ottawa flow? Name three of the principal tributaries of the Ottawa. From what lake does the Saguenay flow? What is the general direction of the northshore rivers? What is the principal tributary of the St. Lawrence on the south? From what lake does it flow? Where is this lake situated? What two rivers flow into Lake St. Peter? What one into the St. Lawrence a little above Quebec? What three lakes are formed in the St. Lawrence? What three in the Ottawa River? What two lakes are in the south-east of Quebec? What one in the County of Temiscouata?

What large bay is in the east between the County of Bonaventure and the Province of New Brunswick? What two bays at the eastern point of Gaspé? Some two islands in the Ottawa River. Eight islands in the River St. Lawrence? One large island in the Gulf of St. Lawrence? One small island off the eastern coast of Gaspé? A group of islands east of the Bay of Chaleur? What strait is between the north-eastern part of Quebec and Newfoundland? What point is on the north shore where the River St. Lawrence widens into the Gulf? What cape on the opposite shore? What cape at the eastern extremity of the south shore? At the northern extremity? What peninsula forms the eastern extremity of the south shore?

What nine counties of Quebec are on the Ottawa River? (Include Soulanges and the Islands of Montreal, Bizarre, and Jesus.) What are their chief towns? What fourteen are on the north bank of the St. Lawrence? What are their chief towns? What eighteen are on the south bank of the St. Lawrence? What are their chief towns? What nineteen are east of these? What are their chief towns? Which twelve counties form what is called "The Eastern Townships"? What county is on the Bay of Chaleur? What is its town?

What two large cities are on the River St. Lawrence? What city is at the mouth of the Richelieu? At the mouth of the St. Maurice? What town is opposite Ottawa on the Ottawa River? What town in Sherbrooke County is on the St. Francis River? What city is on the Yamaska River in St. Hyacinthe County? In St. John's County on the Richelieu River?

REVIEW EXERCISES.

Islands.—*In what direction from the nearest counties? In what waters?*

Montreal? Jesus? Bizarre? Orleans? Aux (a) Coudres? Hare? Verte? Bic? Anticosti? Magdalen? Bonaventure? Allumette? Calumet?

Peninsulas.—*From what part of the continent does it project? Between what waters?*

Gaspé?

Capes.—*From what part of the country does it project? From what county Des (Day) Monts? Chat? Madelaine? Gaspé?*

Mountains and Hills.—*In what part of the province are they? In what direction do they extend?*

Wotchish? Laurentide? Notre-Dame?

Bays.—*What coast does it indent or wash? Of what body of water is it an arm?*

Chaleur? Gaspé? Mal?

Strait.—*Between what lands? What waters does it connect?*

Belle Isle?

Rivers.—*Where does it rise? Through or past what counties does it flow?*

St. Lawrence? Ottawa? St. Maurice? Saguenay? Richelieu? Gatineau? Du Lièvre? Conlonge? Chaudière? St. Francis? Yamaska?

Lakes.—*Where situated? What outlet has it?*

Temiscaming? St. John? Champlain? St. Francis? St. Louis? St. Peter? Two Mountains? Des Chats (Day Shah)? Chaudière? Memphremagog? Megantic? Temiscouata?

Cities and Towns.—*In what county? On what water?*

Montreal? Quebec? Sorel? Three Rivers? Hull? St. Hyacinthe? Sherbrooke? St. John's? Bryson? Aylmer? Lachute? Vandreuil? Coaticook Landing? Pt. Claire? Lachine? Ste. Rose? Terrebonne? Industry? Berthier? Rivière du Loup? Batiscan? Cap Sainte? Chateau Richer? Murray Bay? Tadoussac? Huntington? Chateauguay? Beauharnois? Laprairie? Longueuil? Verchéres? Bécancour? Pointe-Lévis? L'Islet? Kamouraska? Cacouna? Rimouski? Gaspé? Percé? New Carlisle? Fredericton? Knowlton? Waterloo? Leeds? Richmond? Cookshire? Coaticook?



GENERAL DESCRIPTION.

The Province of Quebec occupies the lower part of the Valley of the St. Lawrence, and extends from the Ottawa River to Labrador, being bordered on the north by the Height of Land, separating it from the North-East Territory, and on the south by the Height of Land separating it from the United States and the Province of New Brunswick.

The Area is rather less than that of Ontario (*including the Disputed Territory*), and the Population one third less.

Quebec is commercially important, as it controls the great northern water-route of North America (*the St. Lawrence River*), and ocean vessels cannot pass the port of Montreal.

The Surface, unlike that of Ontario, is generally mountainous, although in the south-east there are some level tracts.

The Laurentide Hills on the north bank of the St. Lawrence have an average height of about 1,300 feet, but some summits are from 2,000 to 3,000 feet high. Farther north are the Wotchish Hills, which range about the same height, and form part of the watershed between the St. Lawrence and Hudson Bay basins. Through the Laurentide Hills several rivers break, passing by deep gorges into the St. Lawrence.

On the south bank of the St. Lawrence the mountains are higher and more precipitous. They form a continuation of the Appalachian Chain, which extends through the eastern part of the United States, and are known in Canada as the Notre Dame Mountains. They extend to the extremity of the Peninsula of Gaspé (*see p. 29*); the highest summit is Mt. Logan (3,768 feet).

Quebec is not rich in Minerals, but magnetic iron-ore is found throughout the Laurentian Hills north of the Ottawa River and near the St. Lawrence; phosphates in the Lievre River district; plumbago in the County of Ottawa; gold in the Chaudière Valley; copper and asbestos in the Eastern Townships.

The Rivers of Quebec are all tributaries of the St. Lawrence or of the Ottawa. Only a few of them are navigable—the Richelieu to Lake Champlain; the Saguenay to Ha-ha Bay (60 miles), and others for a short distance from their mouths. Many are, however, invaluable to the lumbermen for floating logs and timber down to a convenient shipping port, and many

are leased for the salmon-fishing, which is one of the greatest attractions of the lower St. Lawrence.

As the rivers have to break through the hilly barrier to the St. Lawrence they form magnificent scenic effects, passing between lofty cliffs and forming picturesque waterfalls. Cape Trinity on the Saguenay (*see engraving, p. 27*), the Falls of the Montmorency below Quebec, the Falls of Shawanegan on the St. Maurice (150 feet high), are among the notable features, but many other scenes of beauty might be named.

Quebec, like Ontario, contains numerous Lakes, the principal of which are lake St. John, the source of the Saguenay River; lakes Megantic and Memphremagog in the south-east; lake Temiscouata, from which the River Madawaska flows into the St. John River; and lake Temiscaming on the Ottawa, bordering on the Province of Ontario.

The Soil of Quebec is not generally so productive as that of Ontario, although in the eastern and southern parts of the Province the hardier cereals are grown, and beet-root and flax are extensively cultivated.

The Climate of Quebec is healthy, but is subject to greater extremes than in Ontario; the winters are long and severe, and the summers short but warm, causing vegetation to progress very rapidly as soon as the snow disappears.

Every part of the Province capable of cultivation is industriously worked. On the north shore of the St. Lawrence beyond the Saguenay the soil is not fit for cultivation, but is covered with dense woods; the south shore, however, has numerous fertile valleys.

The chief Industry of Quebec is lumbering. Valuable timber lands extend from the valley of the Ottawa north-eastward, and include pine, oak, ash, elm and other woods; on the south side of the St. Lawrence the forests are also extensive.

Fishing is an important industry, and is largely carried on along the shores of the St. Lawrence and around the islands in the Gulf (Magdalen Islands, Anticosti, and others).

The annual value of the fish taken in Quebec—chiefly cod, herring, and lobsters—is about 2,000,000 dollars.

The principal Manufactures are of goods for domestic use, and are carried on mainly in or near the largest cities, Quebec and Montreal; they consist chiefly of cottons, woollens, boots and shoes, iron manufactures, sugar refining, paper-making, and wood-working.



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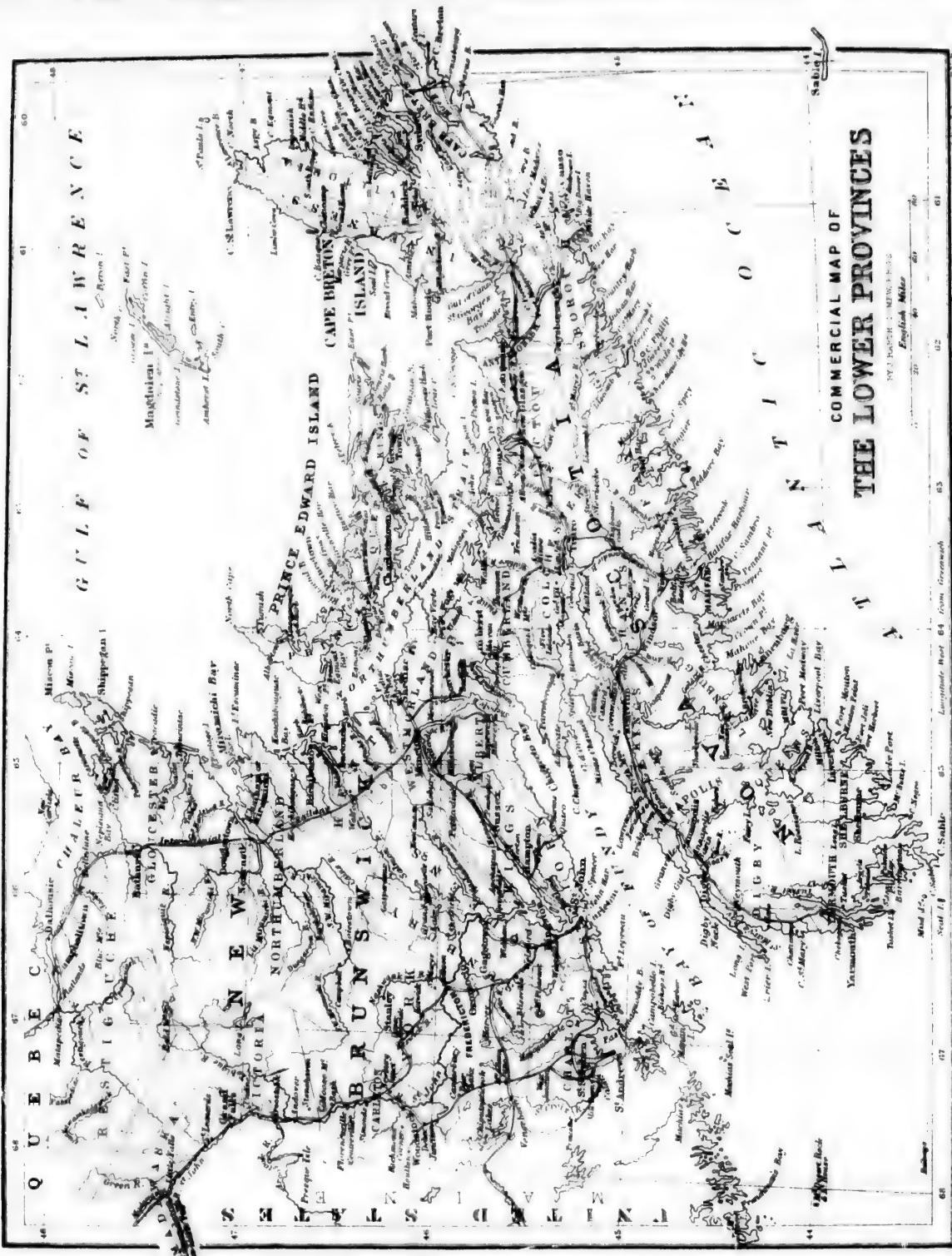
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The **Exports**, owing to Quebec being the ocean-shipping Province for much of the products of Ontario and the Northwest, are larger than those of any of the Provinces.

They amounted in 1883 to nearly 43,000,000 dollars, including amongst other articles—**Animals** and their produce, 12,000,000; the **Product of the Forest**, 12,000,000; **Agricultural Produce**, 14,000,000. Some idea may thus be formed of the vast traffic on the St. Lawrence. Of the whole amount no less than 33,000,000 dollars in value was sent to Great Britain.

Quebec is divided into **Sixty-one Counties**, which may be grouped into:—nine on the Ottawa River; fourteen on the north bank of the St. Lawrence; eighteen on the south bank; nineteen east of the latter (of which twelve in the south-east are known as the **Eastern Townships**); and one on the Bay of Chaleur.

Montreal, on the island of the same name, between the Ottawa and St. Lawrence Rivers, is the largest and wealthiest city of the Dominion. Being at the head of ocean navigation by the St. Lawrence, it is the point of transhipment from the ocean to the interior. It contains numerous fine buildings and has extensive manufactures.

The St. Lawrence is here crossed by the famous Victoria Bridge, an iron

tubular bridge nearly 2,000 feet long. It is said to be the longest in the world and was built for the Grand Trunk Railway.

Quebec, also on the St. Lawrence, is the capital of the Province, and is one of the oldest cities in Canada. It is noted for its picturesque situation on a height commanding a magnificent view, and has been the scene of several battles between the French and English. It is a fortified city, and the citadel which crowns the height is considered the strongest fortified position in North America. **Levis**, opposite Quebec is one of the termini of the Grand Trunk Railway.

Hull, on the Ottawa River opposite Ottawa, has extensive lumber and wood manufactures; **Three Rivers** has iron manufactures and exports lumber; **Sherbrooke** has valuable water-power and large factories; **St. Hyacinthe** is an important city with considerable manufactures; **Rimouski** is the port of call for the ocean mail steamers, and has a large lumber trade; **Sorel**, at the mouth of the Richelieu River, has important manufactures. **Caughnawaga** and **St. Regis** are Indian villages.

Anticosti and the **Magdalen Islands**, in the gulf of St. Lawrence, belong to Quebec. They are rocky and barren, but are valuable for the fisheries; they are almost uninhabited except in the fishing season.

QUESTIONS ON THE MAP.

New Brunswick.—What province of Canada adjoins New Brunswick on the north? With what province is it connected on the east? What waters are between New Brunswick and Nova Scotia? What isthmus? What country is west of New Brunswick? What state? What large bay forms part of the north-eastern boundary? Name two bays in the Bay of Chaleur. Three bays on the eastern coast. Name two islands on the eastern coast. Two at the mouth of Miramichi Bay. Four capes on the eastern coast. What bay is in the south-west? What two islands? Name two capes on the Bay of Fundy coast. What mountains are in the northern part of New Brunswick? What river forms part of the northern boundary? What two rivers form part of the western boundary? What river flows into Nepisiguit Bay? Name three rivers flowing into the Gulf of St. Lawrence. One into Shepody Bay. Name four tributaries on the eastern bank of the St. John River. One on the western. (*See Map of Quebec.*) In what state is the latter? What tributary flows from Lake Temiscouata in Quebec? Through what lake does Salmon River flow?

What four counties are on the east coast? What are their chief towns? What three on the south coast? What are their chief towns? What three in the interior? What are their chief towns? What four in the west? What are their chief towns? What one in the north? What is its chief town?

Nova Scotia.—What is the physical form of Nova Scotia? By what waters is it nearly surrounded? With what other province of Canada is it connected? How? What large island in the north-east belongs to Nova Scotia? How is Cape Breton separated from Nova Scotia? Name two bays on the north coast. Seven on the Atlantic coast. Four on the Bay of Fundy. Four in Cape Breton? What two capes are on the north of Cape Breton? What three on the east? What cape is at the southern extremity of Nova Scotia? Name six capes on the Atlantic coast. Four on the Bay of Fundy. Two on Northumberland Strait? What strait connects the Bay of Fundy with Annapolis Basin? With Minas Basin? What lake is in Cape Breton? By what two channels is it connected with the ocean? How is it connected on the south with the Atlantic? Name two islands off the southern point of Nova Scotia. Two at the entrance to St. Mary's Bay. Two in Northumberland Strait. One south of Cape Breton. One east of Cape Breton. One in Bras d'Or Lake. What island is east of Nova Scotia, nearly in latitude 44°? What mountains are in the north-west of Nova Scotia? What two ranges near the Bay of Fundy? What is their general direction? Which is the largest lake in the south-east?

What six counties are on the Atlantic coast? What are their chief towns? What four on the Bay of Fundy? What are their chief towns? What four on Northumberland Strait? What are their chief towns? What four in Cape Breton? What are their chief towns?

Prince Edward Island.—In what waters is Prince Edward Island? How is it separated from New Brunswick and Nova Scotia? What two capes are at the northern extremities of the island? What two at the southern? What five bays and harbors are on the north shore? What three on the east? What three on the south? What islands belonging to the Province of Quebec are north-east of Prince Edward Island? Name the three counties of Prince Edward Island. What are their chief towns?

REVIEW EXERCISES.
Islands.—In what direction from the nearest land? By what waters surrounded? Misou? Shippegan? Portage? Fox? Campobello? Grand Manan? Cape Breton? Cape Sable? Seal? Brier? Long? Caribou? Pictou? Madame? Boularderie? Scatari? Sable? Magdalen?

Capes and Points.—From what province does it project? From what part of it? Into what water? Misou? Escuminac? Richibucto Head? Tormentine? Lepreau? Spencer? St. Lawrence? North? Enfumé? Murgain? Breton? Sable? Capo? Philip? Sambro? Spy? La Hove? Negro? St. Mary? Brier? Split? Blomidon? St. George? John? North (P.E.I.)? East? West? Bear?

Bays and Harbors.—What coast does it indent? What counties does it wash? Of what body of water is it an arm? Fundy? Chignecto? Cumberland Basin? Chaleur? Nepisiguit? Caraquet? Miramichi? Shediac? Bay Verte? Passamaquoddy? St. George? Pictou Harbor? Chedabucto? Tor? Jedore? Halifax Harbor? Margaret? Mahone? Liverpool? St. Mary's? Annapolis Basin? Minas Basin? Cobiquid? St. Ann's? Mire? Gabarus? St. Peter's? Bras d'Or? Cascumpie? Richmond? Grenville? Rustico? St. Peter's (P.E.I.)? Souris? Rollo? Cardigan? Hillsborough? Bedeque? Egmont? Little Bras d'Or?

Isthmuses.—Where situated? Between what waters? Chignecto? St. Peter's? **Mountains and Hills.**—In what part of the country are they? In what counties? Bald? Blue? Moose? Cobiquid? North? South? **Rivers.**—Where does it rise? Through or past what counties does it flow? Into what water? Restigouche? St. John? St. Croix? Nepisiguit? Miramichi? Richibucto? Buctouche? Petitcodiac? Tobique? Washedemok? Salmon? Kennebecasis? Aroostook? Madawaska?

Lakes.—Where situated? What outlet has it? Grand? Rossignol?



Cities and Towns.—In what province? In what county? On or near what water?

Fredericton? St John? Carleton? Bathurst? Newcastle? Richibucto? Dorchester? Hopewell? St. Andrew's? Kingston? Gagetown? Oromocto? Woodstock? Grand Falls? Edmundston? Chatham? Moncton? St. Ste-

phen? Sheldiac? Restigouche? Dalhousie? Halifax? Lunenburg? Liverpool? Guysborough? Shelburne? Yarmouth? Digby? Annapolis? Kentville? Windsor? Amherst? Truro? Pictou? Antigonish? Port Hood? Baddeck? Sydney? Arichat? New Glasgow? Charlottetown? Georgetown? Princeton? St. Eleanor? Summerside? Tignish? Souris?

NEW BRUNSWICK.

New Brunswick occupies the western part of the Atlantic slope, extending from the Notre Dame Mountains to the Bay of Fundy, and is connected with Nova Scotia by the Isthmus of Chignecto, which is about sixteen miles in width.

The **Area** is about one-seventh of the extent of Ontario, and the **Population** about one-sixth.

New Brunswick has an extensive **Coast-line** (about 500 miles); the mouths of the rivers and the numerous indentations of the coast furnish many harbors, and are invaluable to the fishermen.

The **Bay of Fundy** is remarkable for its high tides which rise at spring-tides—thirty feet at the mouth of the Bay, and increase to sixty feet at the head, while in the Gulf of St. Lawrence they do not exceed five feet. This is caused by the pressure of the Gulf Stream (*see p. 10*).

The **Surface** is somewhat similar to that of Ontario, being gently undulating and sloping gradually from the mountains in the west and north towards the Gulf of St. Lawrence in the east and the Bay of Fundy in the south.

A slight elevation running from north-west to south-east forms a watershed separating the rivers flowing into the Gulf of St. Lawrence from those flowing into the Bay of Fundy, the latter of which, with the exception of the Petitcodiac, are all tributaries of the St. John River. Parallel with the shore of the Bay of Fundy are also some slight elevations, which forms the watershed of the rivers; the coast ridge is generally rocky and precipitous on the water-side, and is broken only by the St. John River.

In the north are the **Blue** and the **Bald** Mountains, and in the west **Moose** Mountain, but these do not exceed 2,000 feet in height.

The principal **Minerals** are coal and gypsum; iron, manganese (*used to clarify glass and to produce the black glaze on earthen-*

ware), plumbago, and others are also found, but in small quantities.

The Albertite coal, found in Albert County, is peculiar to New Brunswick, and is valuable for the manufacture of oil and for admixture with other coal for the preparation of illuminating gas. Its value may be estimated from the price at which it is sold (from \$15 to \$20 per ton).

Owing to the formation of the country, the **Rivers**, with the exception of the St. John, are short and rapid, and are only navigable a few miles from their mouths.

The rivers flowing into the Gulf of St. Lawrence are notable for their salmon-fisheries. The St. John is navigable to Fredericton, 85 miles, and for vessels of light draught to Grand Falls, 225 miles. The St. John with its tributaries, as well as the northern rivers, are valuable to the lumbermen in floating their timber to St. John, Chatham, and other sea-ports. All the rivers of New Brunswick possess picturesque scenery.

The **Lakes** of New Brunswick are numerous but small, the only one of any size being Grand Lake in Queen's County.

The **Soil** is fertile, and especially in the river-valleys is very productive, yielding most of the grains, fruits and vegetables of the North Temperate Zone.

A large part of the country is covered with dense forests of pine, spruce, hemlock, beech, birch and other woods, and these form a material source of wealth to the Province.

The **Climate** is healthy, but in the north is subject to extremes; along the coast of the Bay of Fundy, owing to the influence of the Gulf Stream, it is milder and more moist; summer fogs are prevalent.

The chief **Industries** are lumbering, ship-building, agriculture, and fishing.

The principal **Exports** are lumber and fish. The total value of exports amounts to about 7,500,000 dollars annually, of which 4,400,000 are of lumber.

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the greater part of which consists of deals (*pine-boards*) sent to Great Britain. The value of the fisheries amount to over 3,000,000 dollars annually.

The principal **Manufactures** carried on are:—ship-building, chiefly at St. John and Chatham; and domestic manufactures, such as woollens, cottons, iron, flour and leather.

New Brunswick is divided into **Fifteen Counties**, which may be grouped into—four on the east coast; three on the south coast; three in the interior; four in the west; and one in the north.

Fredericton, on the St. John River, is the capital. **St. John**, at the mouth of the river, is the largest and most important commercial city. It has a fine harbor, open at all seasons, and is connected with **Carleton**, a suburb, by a suspension bridge. **Portland** adjoins St. John.

Chatham and **Newcastle** on the Miramichi River. **Moncton** on the Petitcodiac, are important ship-building towns; and **Restigouche**, **Shediac**, **St. Stephen** and **St. Andrews** are the principal towns for the fisheries.

NOVA SCOTIA.

Nova Scotia forms the most easterly province of the Dominion, and with it is included the Island of **Cape Breton** on the north-east. It is the smallest province except Prince Edward Island.

about 600 feet; the highest summits are in Cape Breton, about 2,000 feet. Cape Enfumé is 2,100 feet.

Nova Scotia is very rich in **Minerals**.

In proportion to its extent it is unrivalled in the productive capabilities of its coal-fields, which are chiefly in Cape Breton and in the northern counties of the peninsula; gold is largely found along the whole Atlantic coast; gypsum along the Bay of Fundy coast and in Cape Breton; besides these, are iron, galena, manganese, and other minerals; granite of a very fine quality is also found.

Owing to the formation of the country there are no large **Rivers** in Nova Scotia, the longest not exceeding fifty miles.

No part of Nova Scotia is more than thirty miles from the sea. The mouths of the rivers form excellent harbors.

The **Lakes** of Nova Scotia are numerous and generally occur in groups; the largest is **Lake Rossignol** in Queen's County.

Bras d'Or Lake in Cape Breton, enclosing the Island of **Boularderie**, is more an inlet of the ocean than a lake, and nearly divides the Island of Cape Breton into two parts. A canal now connects Bras d'Or Lake with St. Peter's Bay on the Atlantic Ocean, a distance of less than half a mile, so that virtually Cape Breton Island forms two islands.

The **Soil** of Nova Scotia in the northern part and in the valleys between the mountains is fertile, but along the Atlantic coast it is rocky and sterile.

The principal **Products** are the harder cereals—oats, barley and rye; and hay along the river banks. The most productive part of the country is the valley between the North and South Mountains, where apples and maize are cultivated.

The **Area** amounts to about one-fifth of that of Ontario, and rather less than New Brunswick: the **Population** is, however, greater than that of New Brunswick, and is nearly one-fourth of that of Ontario.

In form, Nova Scotia is a peninsula connected with the mainland by the Isthmus of Chignecto. It has, therefore, in proportion to its size, the greatest extent of **Coast-line** (about 1,500 miles) of any of the provinces; and the numerous indentations, especially on the Atlantic coast, form valuable harbors, which are generally open throughout the year.

The coast is generally rocky and precipitous; on the Atlantic side, reefs extend, parallel with the shore, at a distance of from two to six miles; on the Bay of Fundy side, Digby Gut, forming the entrance to Annapolis Basin, is a remarkable break in the rocky coast barrier.

The **Surface** of Nova Scotia is generally level or undulating, except along the north shore where several small ranges of mountains extend along the coast from the north of Cape Breton to the western extremity of the peninsula (see p. 29). The general slope is towards the Atlantic Ocean.

The principal ranges are the **Cobequid Mountains** north of Minas Basin, and the parallel chains of the **North** and **South Mountains** along the shore of the Bay of Fundy. The height of the former is about 1,200 feet, of the latter

The **Climate** of Nova Scotia is healthy and temperate; although subject to sudden changes of temperature, the extremes are not so great as in Ontario.

The chief **Industry** of Nova Scotia is fishing, but mining, agriculture and lumbering are also extensively carried on.

The principal **Exports** are fish—chiefly cod, herring, lobsters, and haddock—sawn lumber, coal, gypsum, potatoes and apples.

The annual exports of Nova Scotia amount to nearly 10,000,000 dollars in value, including—fish, 5,000,000; minerals, 825,000; lumber, 1,600,000; agricultural products, 850,000; and manufactures, 410,000 dollars.

Manufactures are carried on to a limited extent, and are chiefly of articles for domestic consumption—cotton, woollen and leather goods, and wooden-ware.

Nova Scotia is divided into **Eighteen Counties**, which may

be grouped into—six on the Atlantic coast, four on the Bay of Fundy, four on Northumberland Strait, and four in Cape Breton.

Halifax, the capital and largest city, is the terminus of the Intercolonial Railway and the winter sea-port for eastern Canada. It possesses a magnificent harbor and an Imperial dock-yard, and is the British North American military and naval station, with a citadel garrisoned by British troops.

Yarmouth and **Lunenburg** have considerable trade in ship-building and fishing, besides general commerce. **Pictou** and **New Glasgow** are important for their coal mines and ship-building. **Annapolis**, **Windsor** and **Locke Port** are shipping ports.

In Cape Breton, **Sydney** is the centre for the coal-mining region, and **Arichat** on Isle Madame for the fisheries.

PRINCE EDWARD ISLAND.

Prince Edward Island is situated in the Gulf of St. Lawrence, and is the smallest province of the Dominion. It is crescent-shaped, and is separated from Nova Scotia and New Brunswick by Northumberland Strait.

The **Area** is a little over 4,000 square miles, and its **Population** 109,000.

The **Coast** has numerous indentations, which form good harbors. Three of them—Egmont Bay, Richmond Bay, and Hillsborough Bay—nearly divide the island into three parts.

The **Surface** of Prince Edward Island is gently undulating, except in the centre, where some low hills form a watershed between the small streams flowing east and those flowing west. Lakes are numerous. The island contains no **Minerals**.

The **Soil** is remarkably fertile and well adapted for agriculture,

and the **Climate** healthy, not subject to so great extremes as on the mainland.

The chief **Industries** are agriculture, fishing, and ship-building.

The principal **Exports** are potatoes, oats, ships, cattle, and canned lobsters; the annual value of the agricultural products exported is about 380,000, of fish, 480,000; of cattle and cattle products, 240,000; and of ships, 180,000 dollars.

A railway has been built throughout the length of the island from Tignish to Souris, with branches to Charlottetown and Georgetown; and a submarine telegraph cable connects Cape Traverse with Cape Tormentine in New Brunswick. In winter the mails are carried between these points in ice-boats.

Prince Edward Island is divided into **Three Counties**.

Charlottetown is the capital and principal centre of commerce. **Summerside** is the second town in importance, and exports farm produce and oysters; **Georgetown** exports farm produce; **Tignish** and **Souris** are the centres for the fisheries.

the entrance to Hudson Bay? What country is north-eastward of Canada? How is Greenland separated from Canada? What is the capital of the North-West Territories (*in Assiniboinia?*)?

British Columbia.—Between what parallels does British Columbia extend? Which of the United States adjoins it on the south? How is Vancouver Island separated from the mainland? From the United States? What mountains are in the eastern part of British Columbia? In the western? Name three principal rivers flowing into the Pacific Ocean. One passing into the United States. One flowing northward into Alaska. What islands are north of Vancouver Island? How are Queen Charlotte Islands separated from the United States Territory? Name three chief inlets on the coast of the mainland. Two on the west coast of Vancouver Island? What is the capital of British Columbia (*in Vancouver Island?*)? What other town of importance is in Vancouver Island? What town is near the mouth of the Fraser River?

Newfoundland.—How is Newfoundland separated from Labrador? What gulf is west of it? What is the northern point called? The south-eastern? The south-western? What ocean formation is south-east of Newfoundland? What peninsula forms the south-eastern part of Newfoundland? What is the capital? What islands are south of Newfoundland? To what country do they belong?

REVIEW EXERCISES.

Countries, Districts, and Territories.—*How bounded? Where is it?*

Northern? North-eastern? Keeewatin? Athabasca? Saskatchewan? Alberta? Assiniboinia? Boothia? King William? Prince of Wales? Labrador? Greenland? Baffin? Prince Albert?

QUESTIONS ON THE MAP.

(See Commercial Map of Canada.)

Manitoba and Keeewatin.—What province of Canada adjoins Manitoba on the east? What rivers form part of the boundary of the Disputed Territories? What Meridian nearly? (95° W.) What District is north of Manitoba? What Districts west? What Territory north-east? Which of the United States adjoin Manitoba on the south? What mountains are in the south of Manitoba? In the west? What river rises in the United States and flows north through Manitoba? What tributary does it receive from the west? What two tributaries does the Assiniboina receive? What three large lakes are in Manitoba? What large river flows into Lake Winnipeg from the west? What river drains Lake Winnipeg? What large river is north of the Nelson River? What large river enters the Arctic Ocean in the north of Keeewatin? What two large inlets are on the west shore of Hudson Bay? Name three lands north of Keeewatin in the Arctic Ocean? What peninsula forms the north-eastern part of Keeewatin? How is it separated from Baffin Land? What gulf is between Baffin Land and Boothia? What strait between Boothia and Prince of Wales Land? Between Prince of Wales Land and Prince Albert Land? What four sounds and straits between Baffin Bay and the western part of the Arctic Ocean? What is the capital of Manitoba? What two towns are on the Assiniboina? What one on the Red River?

North-west, Northern, and North-East Territories.—Which two Districts adjoin Manitoba? Which two British Columbia? What two great rivers flow north-westward into the Arctic Ocean? What two large rivers join and form the Slave River? Name four large lakes drained by the Mackenzie River? What bay is at the southern extremity of Hudson Bay? How is Hudson Bay connected with the ocean? What is the eastern part of the country called? What large island similar in shape to Newfoundland is at

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Islands.—In what direction from the nearest land? By what waters surrounded?
Southampton? Queen Charlotte? St. Pierre? Miquelon?

Peninsulas.—From what part of the country does it project? Into or between what waters?
Melville? Labrador? Avalon?

Capes and Points.—From what province or island does it project? From what part? Into what water?
Bauld? Race? Ray?

Inlets, Gulfs, Sounds, and Harbors.—What coast does it indent? Of what body of water is it an arm?
Chesterfield? Wager River? Boothia? Baffin? James? Dixon Entrance? Burrard? Bute? Howe? Barclay? St. Lawrence?

Straits, Channels, and Sounds.—Between what lands or islands? What waters does it connect?
Lancaster? Barrow? Melville? Banks? Hecla and Fury? Franklin?

McClintock? Davis? Hudson? Queen Charlotte? Georgia? Juan de Fuca? Belle Isle?

Mountains and Hills.—In what part of the country are they? In what province?

Pembina? Turtle? Riding? Rocky? Cascade? Wood?

Rivers.—Where does it rise? Through what Provinces or Districts does it flow? Into what water?

Albany? English? Red? Assiniboine? Qu'appelle? Souris? Saskatchewan? Churchill? Great Fish? Yukon? Mackenzie? Peace? Athabasca? Slave? Fraser? Stikine? Skeena? Columbia?

Lakes.—Where situated? What outlet has it?

Winnipeg? Winnipegosis? Manitoba? Athabasca? Great Slave? Great Bear? Lesser Slave?

Cities and Towns.—In what province is it? In what part? On or near what water?

Winnipeg? Brandon? Portage la Prairie? Emerson? Victoria? New Westminster? Regina? Battleford? Prince Albert? Fort Calgary? St. John's?

MANITOBA AND NORTH-WEST TERRITORIES.

Manitoba is the Central Province of the Dominion of Canada, and occupies a valuable part of the Fertile Belt of the North-West. Under the jurisdiction of Manitoba is included the **District of Keewatin** extending northward from the boundary of Manitoba (the 53rd Parallel N.) to the Arctic Ocean.

In Area Manitoba ranks fourth among the Provinces of Canada; the Population as yet is comparatively small, but is being rapidly increased by immigration, fostered by the building of the Canadian Pacific Railway, which passes through the Province, and by the liberal terms on which prairie lands can be purchased for farming purposes.

A portion of the territory claimed by Manitoba is also claimed by Ontario. This **Disputed Territory** extends from Port Arthur on Lake Superior westward to the north-west angle of the Lake of the Woods; thence north to the English River, a tributary of the Winnipeg River, which flows into Lake Winnipeg; and from that eastward to the 9th Meridian W., bounded on the north by the Albany River and James Bay.

The **Surface** is chiefly level prairie land, with detached ranges of hills, rising from 600 to 800 feet above the prairie, but seldom exceeding 1,500 feet above the level of the sea. The Disputed Territory is, however, well timbered.

In the south are the **Pembina** and **Turtle Mountains**, and in the west the **Riding Mountains**.

Manitoba contains no **Minerals**, although just outside its

borders coal is found in the Souris district, and iron on the Nelson and Churchill Rivers in Keewatin.

Manitoba possesses numerous **Rivers and Lakes**, which are valuable for the water communication they afford.

The principal Rivers are:—the **Red River**, navigable 400 miles to Moorhead (in the United States), where it is crossed by the Northern Pacific Railway; the **Assiniboine**, an affluent of the Red River, navigable for 320 miles, the **Albany River** forming part of the boundary between Manitoba and Ontario; the **Winnipeg River**, draining the **Lake of the Woods**, **Rainy Lake**, **Lac Seul**, and others; the **Nelson River** (in Keewatin), draining Lake **Winnipeg**; and the **Churchill** and **Severn Rivers**, also in Keewatin. The last four are not present available for navigation, owing to the rapids in their courses.

The principal Lakes of Manitoba are.—**Winnipeg**, **Manitoba**, and **Winnipegosis**, the first of which is 280 miles long, and the others about 100. A person can travel, via the Saskatchewan River, from Winnipeg in Manitoba to Edmonton, near the base of the Rocky Mountains, by steamer, a distance of 1,500 miles.

The **Soil** of Manitoba is remarkably fertile, yielding large returns of wheat, oats, barley, and roots. The **Climate**, although severe in winter is remarkably dry and healthy.

The principal **Industries** are agriculture and stock-raising, and the **Exports**, which at present are small, consist chiefly of cattle and their products.

Almost all the grain is consumed in the country, although the prospects are that in course of time, a large quantity will be available for exportation.

Manitoba is divided into **Four Counties**, and these are subdivided into **25 Electoral Divisions**, each of which elects a member to the local House of Assembly.

The **District of Keewatin** is at present unimportant, but in the event of a railway being built from Winnipeg to Port Nelson (600 miles), and a steamship route established from that port to Great Britain (*see Commercial Map of the Dominion*), the southern part, which resembles Manitoba in its physical features, may be made available for colonization.

Mining and lumbering will probably be the chief **Industries** of Keewatin.

Winnipeg, at the confluence of the Assiniboine and Red Rivers, is the capital and largest town of Manitoba. It is the centre of trade for the whole of the North-West, and is remarkable for its rapid growth. **St. Boniface** is on the Red River opposite Winnipeg.

Emerson, **Portage la Prairie**, and **Brandon** are towns which are rapidly rising in importance.

NORTH-WEST TERRITORIES.

The **North-West Territories** comprise the immense region extending west from Manitoba and Keewatin to British Columbia and Alaska, and north from the boundary of the United States (the 49th Parallel, .) to the Arctic Ocean.

From this territory **Four Districts** have been formed and organized for settlement and government. These are **Saskatchewan**, **Assiniboia**, **Alberta** and **Athabasca**. The remainder of the territory is still unorganized, and as yet is only occupied by a few Indians, Hudson Bay Company traders, and missionaries belonging to different religious denominations.

The **Area** of each of the organized Districts is about half that of Ontario, but the population is small, although along the line of the Canadian Pacific Railway immigration is extensive, and numerous Colonization Companies have been formed, with a view of developing the resources of the country.

The **Surface** of the country is similar to that of Manitoba (*see also p. 30*), chiefly level prairie land, with short ranges of hills, which form the watersheds for the numerous rivers which flow from the Rocky mountains, eastward and northward.

The principal **Hills** are in the south, the **Cypress Hills**, and **Wood Mountains**; these form the watershed between the Saskatchewan and Missouri (*United States*) Rivers. In Athabasca are the **Cariboo** and **Birch Mountains**, which form the watersheds for the Peace River. North of the Saskatchewan there is a height of land, but there are no hills of any consequence.

A remarkable feature of the surface of the North-West Territories is its division into three distinct plateaus, extending from north-west to south-east—the first, including the Red River and Lake Winnipeg region, from 800 to 1,000 feet above the sea; the second, including the Souris, Assiniboine and Qu'Appelle district, about 1600 feet above the sea; and the third extending from the 104th meridian, rising from 2000 feet to 4000 at the base of the Rocky Mountains.

The principal **Mineral** of the North-West Territories is coal (*see p. 31*), although traces of gold, iron, and gypsum are found, chiefly on the North Saskatchewan, near Edmonton.

Coal is of special economic value for heating purposes, on account of the scarcity of timber on the prairies, and the intensity of the winter cold.

The **Rivers** are numerous, but with the exception of the Saskatchewan, are of no commercial value. There are also many

extensive **Lakes**, especially in the unorganized territory, which are drained by large rivers flowing into the Arctic Ocean, or into Hudson Bay. Of these **Great Bear Lake** and **Great Slave Lake** are larger than Lake Ontario, and **Lake Athabasca** is nearly as large.

The **Climate** of the North-West Territories, although severe in winter, is exceedingly healthy on account of its extreme dryness (*see p. 31*), and although the thermometer may fall to 40° below zero the cold does not seem more intense than it would be in Ontario at zero.

Blizzards, or cold fierce westerly winds, occur in winter, and are destructive to cattle and property.

The **Musk-ox** (*see Illustration, p. 21*) is peculiar to the Canadian North-West, and is found nowhere else in the world; it inhabits the barren plains around Hudson Bay, and rarely comes south of the 60th Parallel N. The **Buffalo**, which formerly roamed over the great plains in immense herds, is now almost extinct. **Bears**, grizzly and black, are numerous, as are also other wild animals.

The **Canadian Pacific Railway** now traverses Manitoba and the North-West Territories from Port Arthur on Lake Superior to the Rocky Mountains and when completed will form a continuous line from the Atlantic to the Pacific Ocean through Canadian territory.

The chief **Industry** of the North-West is agriculture and stock-raising (*see p. 32*). In course of time when the valuable coal mines are opened up these will form one of the greatest resources of the country.

Regina, in the district of Assiniboia, is the principal town, and residence of the Lieutenant-Governor. **Prince Albert**, near the confluence of the two branches of the Saskatchewan, is a comparatively old settlement. **Battleford**, **Fort Calgary**, **Edmonton**, and other places on the line of the Pacific Railway may in course of time develop into towns of importance, as immigration increases.

NORTH-EAST TERRITORY.

The **North-East Territory** is situated on the eastern shores of Hudson and James Bays, and includes all the land north of the Province of Quebec to Hudson Strait, except the eastern part (*Labrador*) which is under the jurisdiction of Newfoundland.

It is of no value for agricultural purposes, but contains many valuable minerals—coal, iron, manganese, galena, and others, but as yet they are not worked. The principal region where these are found is in the vicinity of the Great and Little Whale Rivers.

The **Inhabitants** are few, consisting only of servants of the Hudson Bay Co. and Indians. The only trade is in furs, which are bartered by the Indians, at the Hudson Bay Company's forts, for provisions, ammunition and clothing.

NORTHERN TERRITORY.

The **Northern Territory** includes the small detached portion of land extending from the Albany River (the boundary of Ontario) northwards to Hudson Bay, and is separated on the west from Manitoba by the 80th Meridian W., and from Keewatin by the 91st Meridian W.

This territory is as yet almost uninhabited, and, like the rest of the land surrounding Hudson and James Bays, is of little value agriculturally or commercially.



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BRITISH COLUMBIA.

British Columbia comprises the greater part of the Western Highland of Canada, extending from the 49th Parallel N. (*the boundary of the United States*) to the 60th Parallel N.; together with **Vancouver Island**, **Queen Charlotte Islands**, and numerous other islands along the coast.

In **Area**, British Columbia is the largest Province of the Dominion, but only contains a **Population** of about 50,000.

North of Queen Charlotte Islands, the coast and adjoining islands form part of the Territory of Alaska, belonging to the United States.

The **Coast-line** of the mainland and of the western shore of Vancouver Island is deeply indented by numerous narrow inlets, with precipitous rocky banks. Into these the rivers which make their way through the Cascade Range on the mainland and the Coast Range on the Island flow to the ocean.

The principal inlets are **Burrard Inlet**, **Bute Inlet**, and **Howe Sound** on the mainland; and **Barclay** and **Nootka Sounds** on Vancouver Island. These all form safe and valuable harbors.

The **Surface** of the mainland and of the islands is mountainous (*see p. 28*). The outer slopes of the mountains of the mainland are covered with timber—Douglas pine, Menzies fir, hemlock, balsam, cedar, and other woods, while the interior plateau contains vast tracts of land suitable for grazing.

The Rocky Mountains on the eastern border are crossed by several **Passes** which are from 5,000 to 6,000 feet in height above the level of the sea. The Canadian Pacific Railway will cross through the **Kicking Horse Pass**, then through the **Selkirk Range** and along the Thompson and Fraser Rivers to New Westminster and Burrard Inlet.

The **Rivers** of British Columbia are rapid, and afford abundant water power as well as a plentiful supply of water in those regions when irrigation is required.

The principal commercial rivers are the **Fraser**, on which steamers run from New Westminster to Yale; the **Skeena**, navigated by steamers from Nanaimo (*V.I.*) on the route to the gold mines of Omineca; the **Nasse**, on the upper part of which gold is found. These are all also valuable for their fisheries. The **Stikine**, **Peace**, **Thompson** and **Columbia Rivers**, although larger, have at present but little commercial value.

The **Lakes**, both on the mainland and islands, are numerous, but generally small.

The **Climate** of Vancouver Island is unsurpassed by that of any part of the Dominion, and although the island is situated much farther to the north than Ontario, in winter snow rarely lasts more than two or three days (*see p. 31*). The mainland is subject to greater extremes; on the coast heavy rains occur in spring and autumn, but between the Cascade Range and the Rocky Mountains the rains are light and the climate dry; the central region, owing to its elevation, is cold in winter.

The chief **Industries** of British Columbia are mining and fishing.

Gold is found throughout the whole extent of the Province; coal, bituminous and anthracite, in Vancouver Island, in Queen Charlotte Island, and on the mainland; silver and iron in various parts. The gold is obtained chiefly by washing (*see illustration above*).

The coal mines of British Columbia are probably even more valuable than the gold mines. The coal from the Nanaimo mines now leads the market in San Francisco and on the Pacific coast; and the supply is of incalculable advantage, not only for the inhabitants of the country but also for the Imperial Navy and the mercantile marine.

Salmon-canning is an important industry on the **Fraser River**, and yields the most valuable item of British Columbian export. Agriculture is confined chiefly to the lower valley of the Fraser and to parts of Vancouver Island; the produce consists altogether of articles for home consumption.

The **Exports** are larger in proportion to the population than those of any other province. They amounted, in 1883, to nearly 3,400,000 dollars; including gold and coal, 1,300,000; fish, 1,300,000; and timber, 400,000.

British Columbia is divided into **Eleven Districts** for electoral and municipal purposes.

Victoria, the capital, is the principal centre of trade in Vancouver Island, and possesses an excellent harbor. **Nanaimo** is the centre of the coal-mining region. **Esquimalt** is the British naval station for the North Pacific.

New Westminster, on the **Fraser River**, is the principal town on the mainland. **Lytton**, **Yale** and other places on the **Fraser River** are as yet only small villages.

Burrard Inlet, on the Gulf of Georgia, a few miles from New Westminster, forms a safe and commodious harbor, and is the port from which the lumber trade is chiefly carried on. **Port Moody** on Burrard Inlet is intended to be the terminus of the Canadian Pacific Railway.

NEWFOUNDLAND.



CAPE RACE—MEETING THE STEAMER.

Newfoundland is the only British North American Province which is not included in the Dominion of Canada.

It is situated at the mouth of the Gulf of St. Lawrence, and is separated from Labrador on the north by a narrow strait about six miles wide, and from Cape Breton on the south by a passage of about sixty miles in width.

Newfoundland has control over the eastern part of **Labrador** from the Strait of Belle-Isle to Cape Chudleigh.

The **Area** of the island is nearly double that of Nova Scotia, but the **Population** less than one half.

The **Surface** is hilly, with numerous lakes and rivers. The highest elevation is in the western part, where the **Long Range Mountains** extend along the coast, forming part of a low range parallel to the Appalachian Chain, and extending through Cape Breton to Nova Scotia (*see p. 29*).

The **Coast-line** is deeply indented with numerous bays, especially on the north and east, and is generally rocky and precipitous.

Cape Race (*see Illustration*) was formerly the calling point of the Atlantic steamships for the transmission of news until the submarine telegraph cables were laid down. Now the coast is avoided on account of the numerous currents caused by the meeting of the Arctic Current and the Gulf Stream.

Newfoundland is rich in **Minerals**—copper, silver, lead, and others, but they are not as yet much developed.

The **Rivers** are small, not exceeding 100 miles in length, and are of no value for navigation.

The two principal rivers are the **Exploits** and **Humber**.

The **Soil** is not adapted for agriculture except in some parts on the southern coast. In the interior the lowlands are largely covered with lakes and marshes, and the higher lands are rocky and barren.

The **Climate** is healthy, but the Arctic Current on the north coast bringing numerous icebergs from Baffin Bay makes the winters long and retards vegetation.

Fogs are prevalent on the coast owing to the meeting of the Arctic Current and Gulf Stream, whereby the moisture of the air overhanging the latter is condensed (*see p. 15*).

The chief **Industry** of Newfoundland consists in the fisheries.

The cod-fishery on the Banks of Newfoundland is the most extensive in the world, and is carried on, not only by the inhabitants of Newfoundland, but by fishermen from the United States, France, and other countries.

In the early spring, seals are very numerous on the north coast and on the coast of Labrador, before the ice begins to move; these form a valuable source of wealth to the hardy sailors of Newfoundland. They are hunted on the ice for their skins which are made into leather, and for the oil which is made from their fat. There are no fur-seals on these coasts.

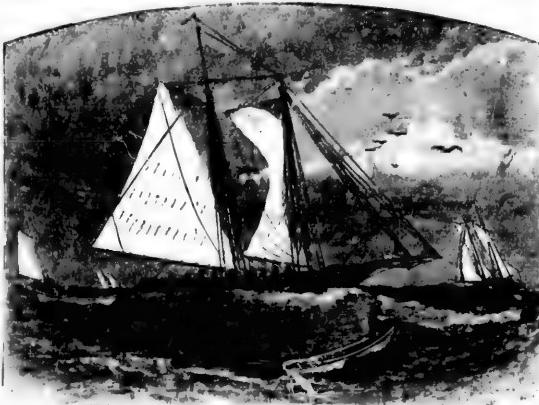
The chief **Exports** are dried cod-fish, cod and seal oil; and **Imports**—provisions from Canada and the United States, and manufactured goods from Britain.

The **Inhabitants** being chiefly fishermen or connected with the fisheries, live near the coast, and the greater number are on the Peninsula of Avalon in the south-east.

St. John's, the capital, and principal seat of trade, possesses an excellent harbor, and is the most easterly sea-port of North America. **Harbor Grace** is the next town in importance. **Carbonear**, **Brigus**, **Trinity** and other towns are fishing centres, but do not contain more than 2,000 inhabitants. **Heart's Content**, a village on Trinity Bay, is the landing place of the Atlantic Cable from Valentia (*Ireland*).

The Islands of **St. Pierre** and **Miquelon**, off the south coast, belong to France. They are valuable as fishing stations. The French submarine cable to America extends from Brest to St. Pierre, and thence to Massachusetts (*U.S.A.*).

The **Banks of Newfoundland**, elevations at the bottom of the Atlantic Ocean, are situated to the south-east of the island. They have been formed by the meeting of the Arctic Current and Gulf Stream, whereby the icebergs of the north have been melted and the earthy matter contained in them deposited in the ocean. These Banks are from 150 to 500 feet below the surface of the ocean, and are the favorite feeding-ground of the cod-fish; they extend eastward about 600 miles.



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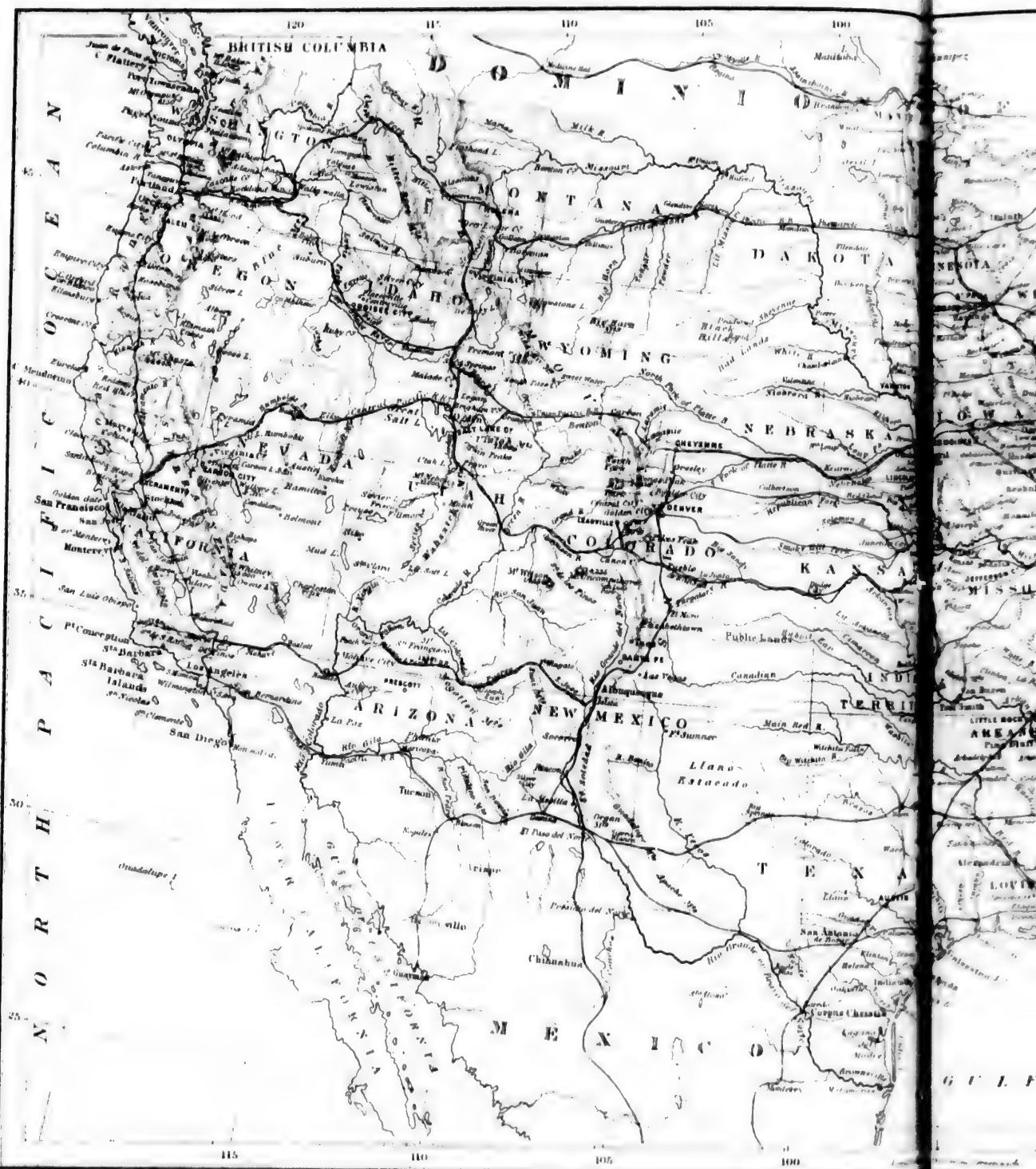
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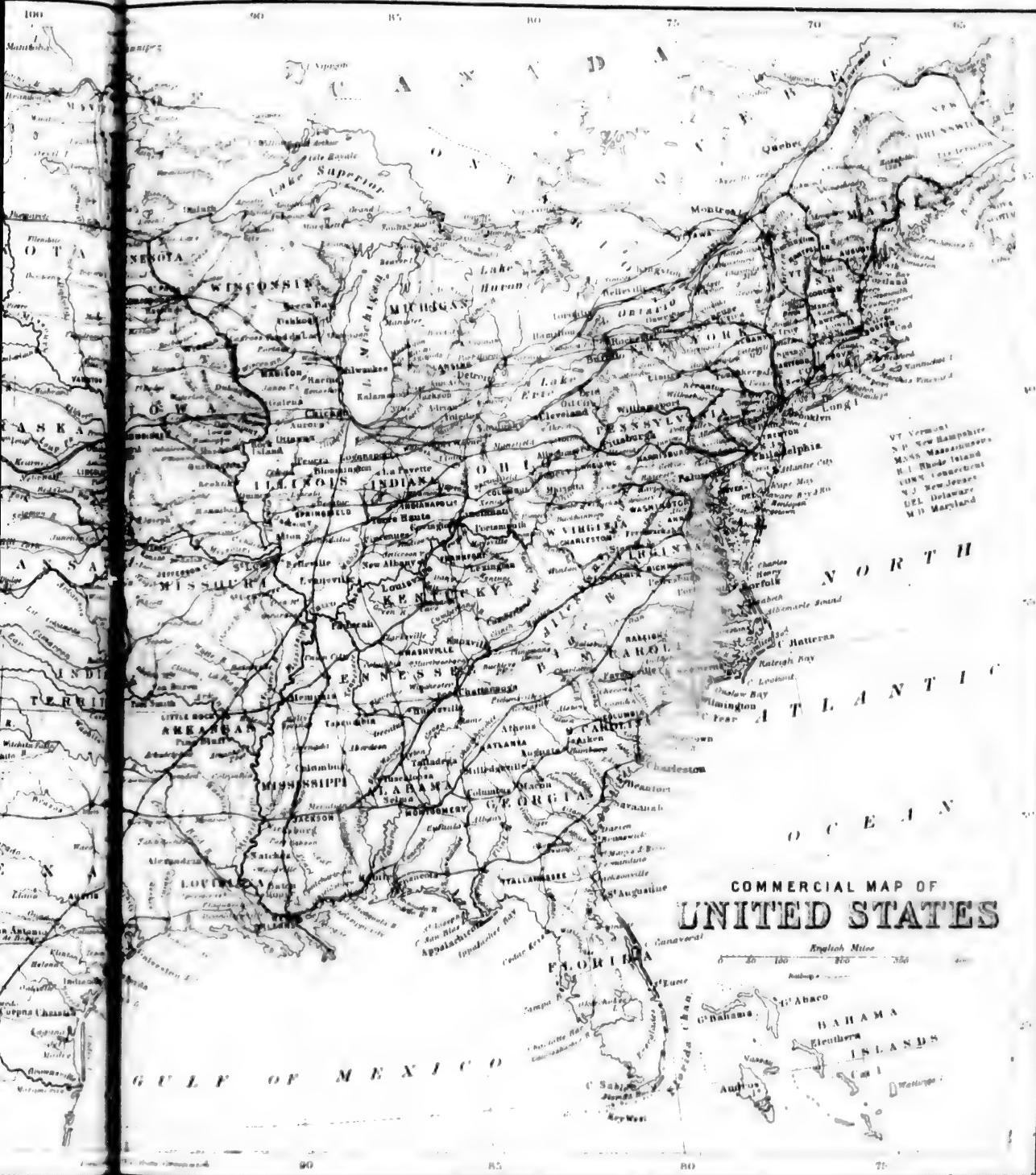
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CHIEF CITIES AND TOWNS OF CANADA AND NEWFOUNDLAND -REFERENCE TABLE

CITY OR TOWN.	COUNTY.	POPULATION.	CITY OR TOWN.	COUNTY.	POPULATION.
Ontario			Quebec		
Toronto	York	86,415	Montreal	Hochelaga	140,747
Hamilton	Wentworth	36,011	Quebec	Quebec	62,346
Ottawa	Carleton	27,412	Three Rivers	St. Maurice	9,296
London	Middlesex	19,746	Levis	Levis	7,397
Kingston	Frontenac	14,001	Sherbrooke	Sherbrooke	7,247
Guelph	Wellington	9,890	Montmagny	Montmagny	6,800
St. Catharines	Lincoln	9,631	St. Thomas	St. Thomas	6,415
Brantford	Brant	9,616	St. Henri	Hochelaga	5,874
Belleisle	Hastings	9,516	St. Jean Baptiste	Richelieu	5,791
St. Thomas	Elgin	8,367	Sorel	St. Hyacinthe	5,341
Stratford	Perth	8,239	St. John's	St. John's	4,314
Chatham	Kent	7,873			
Brockville	Leeds	7,609			
Peterborough	Peterborough	6,312			
Windsor	Essex	6,561			
Port Hope	Durham	5,585			
Woodstock	Oxford	5,373			
Galt	Waterloo	5,187			
Lindsay	Victoria	5,081			
Cobourg	Northumberland	4,957			
Barrie	Simcoe	4,854			
Goderich	Huron	4,561			
Cornwall	Stormont	4,468			
Collingwood	Simcoe	4,445			
Owen Sound	Grey	4,426			
Ingersoll	Oxford	4,318			
Berlin	Waterloo	4,054			
Sarnia	Lambton	3,874			
Dundas	Wentworth	3,709			
Petrolia	Lambton	3,495			

QUESTIONS ON THE MAP

(Commercial Map of Canada.)

What province is situated altogether on or near the Great Lakes? What province on the St. Lawrence? What two provinces on the Atlantic coast? What small province in the Gulf of St. Lawrence? What province and districts are between Ontario and the Rocky Mountains? What province is on the Pacific coast? What important islands does it comprise?

What are the principal products of Ontario? By what routes are they exported, in summer? In winter? To what countries are they chiefly sent? What are the principal products of Quebec? Of the Maritime Provinces (New Brunswick, Nova Scotia, and Prince Edward Island)? What is exported from British Columbia? What are the two principal shipping ports in

Quebec? What one in Nova Scotia? What one in New Brunswick? What one in Vancouver Island?

By what routes can a person travel from Sarnia to Glasgow (Scotland) From Toronto to Liverpool? What proposed steamship route passes through Hudson Bay? Through what waters does it pass? How can a person travel from Port Hope to Winnipeg? How can goods be shipped from Winnipeg by steamer to Fort Edmonton?

What submarine cables connect Canada with Europe? On what islands are they landed? Why does their course deflect so much to the south-east of Newfoundland?

QUESTIONS ON THE MAP (United States).

New England States.—What states lie farthest east? (See Statistical Table, p. 51.) Which is the largest? Which borders on New Brunswick? On Quebec? On the Atlantic Ocean? Which one has no seacoast? What river rises in Maine and flows through New Brunswick? What two rivers form part of the boundary between Maine and New Brunswick? What river flows through the New England States into Long Island Sound? What mountains traverse these states? What lake is in Vermont? By what river is it drained? What parallel forms the northern boundary of Vermont? (45° N.) Name the capitals of each state? What city in Maine is the terminus of the Grand Trunk Railway of Canada? Which of the states is an island? What cape is the most easterly point of Massachusetts? What islands are off the south-east coast?

Middle Atlantic States.—What states form this group (see Statistical Table, p. 51)? What state borders on Canada? By what lakes and rivers is New York separated from Ontario? What states border on Lake Erie? On the Atlantic Ocean? On the Ohio River? What three large bays are on the coast? What river flows into New York Bay? Into Delaware Bay? What

four rivers into Chesapeake Bay? What large island is at the entrance to New York Bay? How is Long Island separated from the New England States? What cape is at the entrance to New York Bay? What two at the entrance to Delaware Bay? What two at the entrance to Chesapeake Bay? What mountains traverse these states?

Name the capitals of each state. What large city is at the mouth of the Hudson River? What city is at the head of Delaware Bay? At the head of Chesapeake Bay? What city on the Potomac River? What two cities are on or near Lake Ontario? What city at the entrance of the Niagara River? What city in Pennsylvania is on Lake Erie? What federal district is on the Potomac River?

Southern Atlantic States.—What states form this group? (See Statistical Table, p. 51.) In what direction do the rivers of these states flow? From what highland? What mountains form the boundary between North Carolina and Tennessee? Which is the most southern state? What cape is the most easterly point? The most southerly? What islands are south-east of Florida? What large island is south of Florida? What group of small islands is between Florida and Cuba? (See Map of Mexico, etc.) What town is on one of them? What strait separates Florida from the Bahamas? What current

POLITICAL NORTH AMERICA.

flows through it? What sounds are on the coast of North Carolina? What great swamps are in the southern part of Florida? What bay south of Florida in the Gulf of Mexico? What cities are the capitals of the Southern Atlantic states? What sea-port is in North Carolina on Cape Fear River? On the coast of South Carolina? In Florida, on Pensacola Bay? On the St. John River? What river forms the eastern boundary of Georgia? What city is near its mouth?

Southern Gulf States. What states form this group? Upon what gulf do they border? What large river flows through Louisiana? Of what states does it form part of the boundary? What city is near its mouth? What river flows into Mobile Bay? What city is near its mouth? What river forms the boundary between Texas and Mexico? Into what state do the Appalachian Mountains extend? Where is the *Llano Estacado (Staked Plain)*? What river forms the boundary between Texas and the Indian Territory? What sea-port is in Texas? What port at the mouth of the Rio Grande? What port in Mexico opposite to Brownsville? What cities are the capitals of the Southern Gulf states? What cities in Mississippi are on the Mississippi River?

Southern Central States. What states form this group? Which of them border on the Mississippi River? Through what cities does the Arkansas River flow? The Missouri? What city is near the junction of the Missouri and Mississippi? What river forms the northern boundary of Kentucky? What city in Kentucky is situated on the Ohio River? What city in Tennessee on the Mississippi? What mountains are in Missouri? Name the capitals of each of the Southern Central states. What territory is west of Arkansas?

Northern Central States.—Which states form this group? Which of them border on the Great Lakes? Which of them border directly on Canada? By what river and lakes is Minnesota separated from Canada? What line forms the boundary between Dakota and Canada? What states border on the Ohio River? On the Mississippi? On the Missouri? What bay is in the west of Lake Michigan? In the west of Lake Huron? What island in Lake Superior near the Canadian shore belongs to the United States? Of what does Michigan chiefly consist? (*Of two great peninsulas*) What is the most northerly point called? How is Lake Superior connected with Lake Huron? Lake Huron with Lake Michigan? What river forms part of the boundary between Minnesota and Dakota? Into what lake does the Red River flow? What great river has its source in Minnesota? What hills are in the south west of Dakota? Name the capitals of each of the Northern Central states.

Rocky Mountain State and Territories. What state and territories form this group? In what direction do the Rocky Mountains extend through them? What territories border on Canada? What great river has its sources in Montana? What important tributary of the Missouri flows through Montana? What river flows through New Mexico? What river forms part of the western boundary of Arizona? What tributary of the Missouri has its source in Wyoming? What railway crosses Wyoming and Utah?

What four natural Parks are in Colorado? What mountain range is in Utah? What lake in the north-west?

Name the capitals of Colorado and of each of the territories.

Pacific States. What states and what territory form this group? Which state does not border on the Pacific Ocean? What two ranges of mountains extend through these states? What ranges are near the coast? What high peak is near the boundary of British Columbia? What are the two chief rivers of California? Through what famous valley does a branch of the San Joaquin (*wah'keen*) flow? What river forms part of the northern boundary of Oregon? Where does it rise? What lake is in California? What cape is at the north western extremity of Washington Territory? How is Washington (*Terr.*) separated from Vancouver Island? What sound penetrates the northern part? What islands are south of California? What strait is at the entrance of San Francisco Bay? Name the capitals of each state. What large sea-port is in California? What town south of Sacramento? What city is north of Carson in Nevada? What two towns are in the south of California? What town is north of Salem in Oregon? On what river?

Travels. What principal cities would you pass in travelling by rail from Toronto to New York by way of Niagara Falls and Albany? Through what states and past what cities from Toronto to San Francisco, by way of Chicago? From St. Louis to Baltimore? From Chicago to Philadelphia by way of Pittsburgh? From Montreal to Portland by Grand Trunk Railway?

Through what waters and past what states would you sail from Chicago to Buffalo? From Cleveland to Oswego? From Duluth to Collingwood? From St. Paul to New Orleans? From San Francisco to Victoria? From San Francisco to Panama? From New York to St. John (*N.B.*)? From New York to Savannah? From Charleston to New Orleans?

REVIEW EXERCISES.

States and Territories. How bounded? What is the chief town or capital?

Maine? New Hampshire? Vermont? Massachusetts? Rhode Island? Connecticut? New York? New Jersey? Pennsylvania? Delaware? Maryland? Virginia? West Virginia? District of Columbia? North Carolina? South Carolina? Georgia? Florida? Alabama? Mississippi? Louisiana? Texas? Arkansas? Tennessee? Kentucky? Missouri? Kansas? Colorado? Indiana? Illinois? Michigan? Wisconsin? Iowa? Minnesota? Nebraska? Dakota? Colorado? Montana? Wyoming? New Mexico? Idaho? Utah? Arizona? Oregon? California? Nevada? Washington? Indiana?

Islands. Where situated?

Rhode? Long? Nantucket? Martha's Vineyard? Bahamas? Cuba? Florida Keys? Isle Royale? Santa Barbara?

Peninsulas. From what part of the country does it project? Between what waters?

Florida? Michigan?

Capes. From what coast does it project?

Cod? Sandy Hook? May? Henlopen? Charles? Henry? Hatteras? Sable? Keweenaw? Flattery?

Mountains. Where are they? Through what states do they extend?

Green? White? Adirondack? Catskill? Alleghany? Cumberland? Blue? Ozark? Black Hills? Wahsatch? Cascade? Sierra Nevada? Coast Range? Mt. Baker?

Valleys. Where situated?

North? Middle? South? San Luis? Yosemite (*Yo-sem-e-tay*)?

Gulfs, Bays and Sounds. Where is it?

New York? Delaware? Chesapeake? Long Island? Pamlico? Albemarle? Pensacola? Appalachia? Mexico? Green? Saginaw? Puget?

Straits. Between what lands? What waters does it connect?

Florida? Mackinaw? Juan de Fuca? Golden Gate?

Rivers. Where does it rise? In what direction does it flow? Through or past what states? Into what water?

St. John? St. Croix? Connecticut? Richelieu? Niagara? St. Lawrence? Ohio? Hudson? Delaware? Susquehanna? Potomac? Rappahannock? James? Savannah? Mississippi? Alabama? Rio Grande? Arkansas? Red (south)? Missouri? Ohio? Rainy? Pigeon? Ste. Marie? Red (north)? Yellowstone? Colorado? Platte? Sacramento? San Joaquin? Columbia? Willamette?

Lakes. Where situated? What outlet has it?

Champlain? Erie? Ontario? Everglades? Huron? Superior? Michigan? Rainy? Lake of the Woods? Great Salt? Tulare?

Cities and Towns. In what state is it? In what part? On or near what water?

Augusta? Concord? Montpelier? Boston? Providence? Hartford? Portland? Albany? Trenton? Harrisburg? Dover? Annapolis? Richmond? Wheeling? New York? Philadelphia? Baltimore? Washington? Rochester? Oswego? Buffalo? Erie? Key West? Raleigh? Columbus? Atlanta? Wilmington (*N.C.*)? Tallahassee? Charleston? Pensacola? Jacksonville? Savannah? Montgomery? Jackson? Baton Rouge? Austin? New Orleans? Galveston? Brownsville? Matamoras? Natchez? Vicksburg? Mobile? Little Rock? Nashville? Frankfort? Jefferson City? Topeka? St. Louis? Louisville? Memphis? Columbus? Indianapolis? Springfield (*Ill.*)? Lansing? Madison? Des Moines? St. Paul? Lincoln? Yankton? Cincinnati? Toledo? Cleveland? Sandusky? Detroit? Chicago? Milwaukee? Minneapolis? Denver? Helena? Cheyenne? Santa Fé? Boise City? Salt Lake City? Prescott (*Ariz.*)? Salem? Sacramento? Carson City? Olympia? San Francisco? Los Angeles? San Diego? Stockton? Virginia City? Portland?

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UNITED STATES OF AMERICA.

GENERAL DESCRIPTION.

The **United States of America**, exclusive of Alaska, already described, occupies the central part of the North American Continent, and is the most populous and important country of the Western Hemisphere.

Like Canada, it extends from the Atlantic to the Pacific Ocean; from Canada on the north it extends to Mexico and the Gulf of Mexico on the south.

Being wholly within the **Temperate Zone** (Alaska excepted), the United States possesses the most valuable productive part of the continent, and has a climate most favorable for developing the fertility of the soil and the industry of the people.

Although in **Extent** it is about the same as the Dominion of Canada, yet it contains a **Population** twelve times as great, and takes rank among the most populous, powerful, wealthy and progressive nations of the world.

The **Surface** presents two nearly equal parts of widely different character—the high Western Highland, including the High Western Plain east of the Rocky Mountains; and the lower Eastern Highland—including the great Central and Atlantic Plains.

These Highlands and Plains are a continuation southward of the Highlands and Plains of Canada.

In the **Western Highland** the elevated tract within the lofty mountain ranges (*see p. 23*) contains three principal plateaus. It is ribbed with numerous short parallel chains of mountains, and has been likened to a sea filled with waves many thousand

feet high. The **Wahsatch Mountains** in Utah form the loftiest interior range.

The **Great Basin**, or Depression surrounded by mountain chains, occupies the central part of the Plateau Belt, and the **Colorado Plateau** the southeastern part; in the north is the **Plain of the Columbia**.

The Great Basin encloses the **Great Salt Lake**, and other salt lakes which are fed by the mountain streams, but have no outlet to the ocean. It is separated from the Colorado Plateau by the lofty range of the Wahsatch Mountains, and is from 3,000 to 4,000 feet high. The Colorado Plateau is from 6,000 to 7,000 feet high, while the Plain of the Columbia is only about 2,000 feet above the sea.

The **High Western Plain** slopes gently eastward from the foot of the Rocky Mountains, where it is from 5,000 to 6,000 feet in height towards the valley of the Mississippi. West of the Sierra Nevada and Cascade Mountains is the **Pacific Slope**, and enclosed between these ranges and the lower coast ranges are the fertile valleys of California and Oregon.

The **Rivers** of the Western Highland, with the exception of the Missouri and Yellowstone, are too swift and too shallow to be navigable. The **Red** and **Arkansas** Rivers are navigable only in the lower part of their courses.

The **Columbia**, **Colorado** and **Rio Grande** are the principal rivers draining the great Western Plateau Belt, and these flow through a series of mountain gorges called **Canons**. The beds of nearly all the rivers of the entire highland region are far below the general level of the country through which they flow. The **Missouri** with its tributaries is the great river of the High Western Plain east of the Rocky Mountains.

The plateaus of the Western Highland are dry and barren,

owing to the want of rain, while the coast regions have abundant rain, and particularly towards the north are covered with dense forests.

A large part of the High Western Plain at the foot of the Rocky Mountains is one of the most desolate and arid regions of the continent. Wherever the streams from the melting snows of the mountains can be used for irrigation, abundant crops can be raised, but more than four-fifths of the entire highland is hopelessly barren.

The **Eastern Highland** is small and low in comparison with the **Western**.

It consists of several parallel ranges of the **Appalachian System**, and extends from the Dominion of Canada almost to the Gulf of Mexico. The highest peaks are about as high as the plains at the foot of the Rocky Mountains. It contains many fertile elevated valleys, but no extensive plateaus. The different ranges are known in New Hampshire as the **White Mountains**; in Vermont, as the **Green Mountains**; in New York, as the **Catskill** and **Adirondack Mountains**; in Pennsylvania, as the **Alleghany Mountains**; in Virginia, as the **Blue Mountains**; and in Kentucky and Tennessee as the **Cumberland Mountains**.

From this highland the **Atlantic Slope** on the east forms a long belt of lowland. It is widest in the south (about 300 miles) but narrows rapidly towards the mouth of the Hudson River, where it almost disappears. Farther north it again expands to a width of about fifty miles.

The Atlantic plain is drained by numerous, short and almost parallel **Rivers**. They generally cross the plain at right angles to the line of the highland in which they have their sources.

Most of them are navigable for a considerable distance from the end till interrupted by falls or rapids. These falls furnish valuable water-power.

At the nearest approach of the Eastern Highland to the Atlantic it is intersected by a remarkable depression, which contains the valleys of the **Hudson** and **Mohawk Rivers**, and forms an important highway of commerce.

The **Great Central Plain** or Mississippi Valley, lies between the two highlands, and extends from the Gulf of Mexico to the Great Lakes, where it unites with the basin of the St. Lawrence in Canada.

As the average fall of the Mississippi, the Missouri and their chief branches, as well as of the St. Lawrence, is only about four inches to the mile, the whole of this part of the country is opened to steam navigation, from the Gulf of St. Lawrence to the Gulf of Mexico. A short canal connects the Illinois River, a tributary of the Mississippi, with Lake Michigan, and other canals connect the Ohio River with Lake Erie. The general level face of the country facilitates the construction of railways, canals and roads.

The **Eastern Half** of the United States may be divided into two regions, differing remarkably in vegetation.

Dense forests cover the Atlantic Plain, the Eastern Highland and the

neighboring parts of the Great Central Plain, except where they have been cleared for the purpose of cultivating the ground.

Immense prairies occupy the rest of the Great Central Plain, and there produce enormous quantities of wheat, corn and other grains in the north; hemp and tobacco farther south, and furnish pasture grounds for vast herds of cattle, sheep and swine.

The fertile soil, warm summers, abundant rains, and great range of latitude, make the eastern half of the United States one of the richest sections of country in the world for variety, quantity and value of its agricultural productions.

The **Climate** of the low eastern half of the United States is in general much cooler than that of the Western Highland in the same latitude.

In the east, frequent rains are brought at all seasons by the moist winds of the Gulf of Mexico, the Atlantic and the Great Lakes. In the west, the south-west and north-west winds of the Pacific discharge most of their moisture on the high summits of the Sierra Nevada and Cascade Ranges. The rainfall on the Atlantic coast increases towards the south; on the Pacific coast towards the north.

The prairie region is subject to frequent summer droughts, as the winds lose their moisture before penetrating so far inland.

The leading **Industry** of the United States is agriculture. Its chief seats are in the Atlantic and Great Central Plains, and in the small, rich lowlands of California and Oregon.

It employs nearly one-half of the whole number of those who are engaged in industrial occupations throughout the country.

Among the principal **Agricultural Products** are—rice, maize or Indian corn, wheat and other cereals, the other chief products are—sugar, cotton, and tobacco. Of the former, wheat and maize, and of

the latter, cotton, are commercially the most important. The corn (*maize*) crop far exceeds that of all the other cereals in amount.

Grazing is an important occupation in the agricultural regions, and vast quantities of maize are grown to feed hogs, cattle, and horses.

The prairie and maize districts of the Great Central Plain furnish the principal supplies of cattle, hogs, beef, pork and wool. The northern part of the Eastern Highland, the dairy produce—butter and cheese.

Mining is an important industry, and the vast coal-fields, widely distributed iron-mines, and rich deposits of gold and silver, make the United States a treasury of mineral wealth.

The principal mines of coal, iron and petroleum are in the Eastern Highland; those of gold and silver in the mountains of the Western Highland; those of lead in Nevada, Utah, and the valley of the Upper Mississippi; and those of copper on the shores of Lake Superior.

The **Manufactures** of the United States are varied and important. They are chiefly carried on in the States north of the Ohio and Potomac Rivers.



COTTON-PICKING.

The **various**
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This is on account of the abundance of water power, fuel and labor. The principal manufactured articles are woolen, and iron goods, leather, tools and machinery, flour, lumber and salt.

Agriculture, mining and grazing supply most of the raw materials for manufacture.

Fishing is a leading interest in some of the Eastern States.

The **Foreign Commerce** of the United States is extensive, and for amount ranks third in the world—Great Britain being first and France second.

It is chiefly carried on with Great Britain, France and Germany in Europe, with Canada, the West Indies and Brazil in America, and with China and Japan in Asia.

The numerous indentations on the Atlantic coast afford good harbors, where they are most needed for foreign commerce.

The Pacific coast lacks the advantages possessed by the Atlantic, as it has no great indentations except San Francisco Bay and Puget Sound.

The greater part of the foreign trade centres in the seaports in the north-east half of the Atlantic coast. At least two-thirds of all the imports, and nearly one-half of all the exports, pass through the port of New York. The remainder is chiefly divided between Boston, New Orleans, Philadelphia, Baltimore and San Francisco.

This foreign trade is carried on mostly by means of large steamships, which, however, are owned almost entirely by Great Britain and other nations.

The principal **Exports** are cotton, breadstuffs, provisions, cattle, petroleum, gold and tobacco; the greater part goes to Great Britain. The principal **Imports** are manufactured goods from Great Britain, France and Germany, and foreign produce for consumption.

The **Domestic Commerce** far exceeds the foreign.

Railways connect all the principal towns and cities, and thousands of vessels ply between the principal ports on the lakes or on the coast. The cotton, sugar and tobacco of the south; the grain, flour, cattle and packed pork of the west, the lumber of the forest regions and the products of the mines are supplied to the more thickly settled manufacturing districts. The latter send back their various manufactures; and the commercial cities distribute to the interior the imports received from abroad.

There are three great **Water Highways** from the interior to the ocean—(1) by the Great Lakes and the St. Lawrence River through Canada; (2) by the Great Lakes, the Erie Canal and the Hudson River to New York; (3) by the Mississippi and its branches to New Orleans.

All these water-routes radiate from the low plains of the Upper Mississippi and its branches.

The **Railways** of the United States are more extensive than those of any other country. The low eastern half of the country is covered as with a net-work of iron, especially in the northern part.

There are about 114,000 miles now in operation, and one great railway across the Western Highland to San Francisco connects the commercial system of the east with that of the west.

The main railway routes across the Appalachian region are the **Grand Trunk** of Canada from Chicago to Halifax, Portland and Boston; the **New York Central** and **Erie**, both terminating at New York; the **Pennsylvania Central**, terminating at Philadelphia; the **Baltimore and Ohio**, terminating at Baltimore. Of the southern routes, one traverses Southern Tennessee and Virginia, terminating at Norfolk, and another is between Memphis and Charleston.

These all connect by various lines with the **Central Pacific**, the only completed line to the Pacific Coast. Two other routes to the Pacific are in process of construction—the **Northern**, from Duluth on Lake Superior; and the **Southern**, from St. Louis across Texas.

Telegraph lines extend all over the country, and sub-marine cables connect the United States with Great Britain, France,

and the West Indies, giving every facility for rapid communication to every part of the world.

The **People** are chiefly the descendants of emigrants from Great Britain, Ireland and Germany.

Besides these are the **Negroes** and **Mulattoes**, descendants of slaves brought from Africa, now numbering nearly 6,000,000, the **Indians** or Aborigines, scattered in the Western Highland, or in the Indian Territory set apart for them, and number about 350,000, and the **Chinese**, who are mainly in the Pacific Coast, and number about 100,000.

Out of the whole population of upwards of 50,000,000, less than 2,000,000 are in the Western Highland or west of the Rocky Mountains, the remainder being in the low and fertile eastern half of the country.

The United States consists of **Thirty-eight States**, **Ten Territories**, and **One District**, united under a Federal or General Government.

A **Territory** is a portion of the country not yet admitted as a State, because it has not sufficient population; it is said to be **Organized** when a governor and judges are appointed by the President, and a Legislature elected by the people.

The **General Government** and the several State Governments are all Republican in form.

The General Government consists of a **President**, **Vice-President**, and a **Congress** comprising two distinct bodies, the Senate and the House of Representatives.

The **President** is the chief executive officer, and both he and the Vice-President are elected to hold office for a term of four years. They are chosen by **Electors** from each State, who are appointed by the vote of the people, and are the same in number as the members of Congress from the different States.

The **Senate** consists of two members from each State.

The members are chosen by the State Legislatures, and hold office for six years. Their present number is seventy-six. The Vice-President of the United States is the presiding officer of the House.

The **House of Representatives** consists of members chosen directly by the people of the different States.

The members hold office for two years. They number at the present time 125, each state being entitled to one for every 151,012 of its inhabitants. The representatives elect one of their own number as presiding officer or speaker. Each Organized Territory has a delegate in the house; he may take part in the discussion of all matters relating to his Territory, but he has no vote.

The **Executive Power** is in the hands of the President, who is Commander-in-Chief of the Army and Navy. By and with the consent of the Senate he appoints the Judges of the Supreme Court, and certain other civil and military officers; concludes peace and makes treaties with other nations.

The **Legislative Power** is jointly in the hands of Congress and the President. A law is made by the consent of both Houses and with the approval of the President of the United States. If the latter returns a bill without his approval, he is said to *veto* it, it may afterwards become law if two-thirds of the members of each House approve it.

The **Supreme Court**, the judicial department of the Government, consists of a Chief Justice and Eight Associate Judges.

The complete statement of this plan of government is called the **Constitution**, which was adopted in 1788, and divides the Government into three branches: the Legislative, which makes the laws; the Judicial, which interprets the laws; and the Executive, which executes the laws. Neither the General Government nor any State Government can make a law which is contrary to the Constitution of the United States.



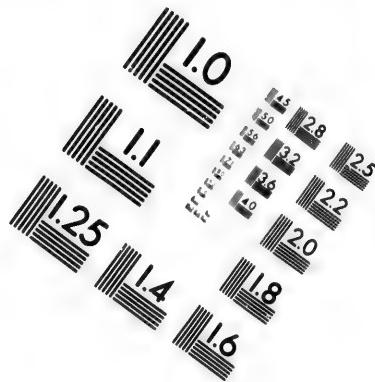
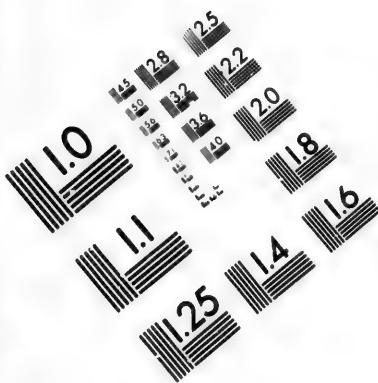
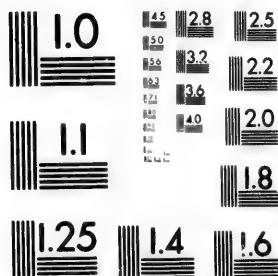
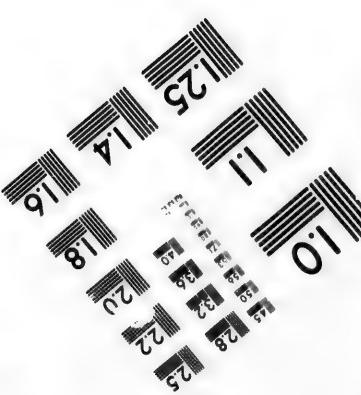


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WEBSTER, N.Y. 14580
(716) 872-4503



Each State is a republic in itself, and regulates its own local affairs—makes and executes its own laws, levies taxes, controls its militia except when they are in the service of the General Government, and has a complete political organization or constitution, similar in most respects to that of the General Government.

It has a Governor elected directly by the people, a Legislature in two departments, and a Supreme Court. An Organized Territory has a government similar to that of a State, except that the Governor and Judges are appointed by the President.

Liberal provision is made by almost every State for the Education of the people.

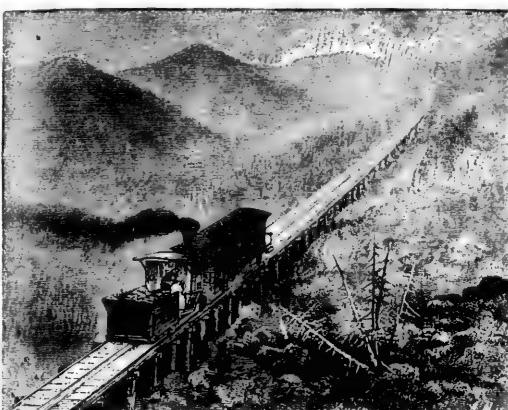
Common Schools are maintained at the public expense, and in some cases High Schools, besides Normal Schools for preparing teachers. There are in the country about five hundred and fifty Colleges; two hundred of which are exclusively for women, but their standard, except in a very few cases, is much below the College standard of Canada.

There is no established Church, and all denominations have equal liberty.

All but seven of the States are in the low eastern half of the country, and all the Territories are in the high western half. For convenience, they may be grouped as shown in the Statistical Reference Table below.

UNITED STATES—STATISTICAL REFERENCE TABLE.

STATES.	POPULATION.	CAPITALS AND CHIEF TOWNS.	CHIEF MANUFACTURES OR PRODUCTS.
New England States —			
Maine	648,036	Augusta, Portland	Ship-building, lumber, fishing.
New Hampshire	346,991	Concord, Manchester	Cottons, woollens, carriages.
Vermont	332,286	Montpelier, Rutland	Dairy products.
Massachusetts	1,763,065	Boston, Springfield	Cottons, woollens, paper, shoes, fisheries.
Rhode Island	279,533	Providence, Newport	Cottons, woollens, iron manufactures.
Connecticut	622,700	Hartford, New Haven	Rubber-goods, hardware, clocks.
Middle Atlantic States —	5,082,871	Albany, New York	Grain, salt; cotton, woollen, iron, and other manufactures.
New York	5,131,116	Trenton, Newark	Garden products.
New Jersey	4,282,891	Harrisburg, Philadelphia	Coal, iron, petroleum.
Pennsylvania	146,608	Dover, Wilmington	Fruit, garden products.
Delaware	934,943	Annapolis, Baltimore	Grain, fruit, oysters, coal.
Maryland	1,512,505	Richmond	Tobacco.
Virginia	618,457	Wheeling	Coal, iron, salt, petroleum.
West Virginia	177,624	WASHINGTON	
District of Columbia .			
Southern Atlantic States —		Raleigh, Wilmington	Turpentine, tar, pitch, tobacco.
North Carolina	1,399,750	Columbia, Charleston	Cotton, rice.
South Carolina	995,577	Atlanta, Savannah	Cotton, rice, sweet potatoes.
Georgia	1,542,186	Tallahassee, Key West	Cotton, oranges and other fruits.
Florida	269,493		
Southern Gulf States —		Montgomery, Mobile	Cotton, corn, lumber.
Alabama	1,262,505	Jackson, Vicksburg	Cotton, corn.
Mississippi	1,131,597	Baton Rouge, New Orleans	Sugar, cotton, rice.
Louisiana	939,946	Austin, Galveston	Cattle, cotton, corn, wool, cattle products.
Texas	1,591,749		
Southern Central States —		Little Rock	Cotton, corn.
Arkansas (Ter.)	802,525	Nashville	Cotton, corn, tobacco.
Tennessee	1,542,359	Frankfort, Louisville	Horses, hemp, tobacco.
Kentucky	1,648,690	Jefferson City, St. Louis	Coal, lead, iron, grain, hemp.
Missouri	2,168,380	Topeka, Leavenworth	Cattle, corn, wheat.
Kansas	996,096		
Northern Central States —		Columbus, Cincinnati	Coal, wool, iron, flax, grapes, pork, tobacco.
Ohio	3,198,062	Indianapolis	Grain, cattle, hogs.
Indiana	1,978,301	Springfield, Chicago	Wheat, corn, oats, hogs, coal.
Illinois	3,077,871	Lansing, Detroit	Lumber, copper, iron, salt.
Michigan	1,636,937	Madison, Milwaukee	Grain, lumber.
Wisconsin	1,315,497	Des Moines	Live-stock, grain, coal, lead.
Iowa	1,624,015	St. Paul, Minneapolis	Lumber, grain, flour.
Minnesota	780,773	Lincoln, Omaha	Cattle, grain.
Nebraska	452,402	Yankton	Wheat, gold, cattle.
Dakota (Ter.)	135,177		
Rocky Mountain States —		Denver	Silver, cattle.
Colorado	197,327	Helena	Cattle, gold.
Montana (Ter.)	39,159	Cheyenne	Coal, cattle.
Wyoming (Ter.)	20,780	Santa Fé	Cattle, wool.
New Mexico (Ter.)	119,565	Boisé City	Cattle, gold, silver.
Idaho (Ter.)	32,610	Salt Lake City	Grain, cattle, silver.
Utah (Ter.)	143,063	Prescott, Tucson	Gold, silver, wool.
Arizona (Ter.)	40,440		
Pacific States —		Salem, Portland	Wheat, wool, timber, cattle.
Oregon	174,768	Sacramento, San Francisco	Gold, wheat, quicksilver, wine, wool.
California	861,694	Carson City, Virginia City	Silver, lead.
Nevada	62,266	Olympia, Walla Walla	Timber, coal.
Washington (Ter.)	75,110		
Unorganized Territories —		Tahlequah	
Indian (Ter.)	76,895	Sitka	Seal fishing, furs.
Alaska (Ter.)	30,156		
TOTAL	50,442,066		



RAILWAY UP MOUNT WASHINGTON.

The **New England States** are generally rocky and mountainous; they are better adapted for pasture than for tillage.

The **Sea-coast** is marked by numerous indentations, which form excellent harbors. These, with the various railways from the interior, afford unsurpassed facilities for commerce.

New England is preeminently the **Manufacturing Region** of the United States.

Its rivers afford abundant water-power, and have busy manufacturing cities on their banks. The quarries of slate, lime-stone and marble are valuable, and the forests of the north furnish large supplies of lumber. The fisheries are the most important in the United States.

Portland, in Maine, is the terminus of the Grand Trunk Railway of Canada. **Boston**, the capital of Massachusetts, is the metropolis of New England. It is the seat of many noted literary institutions, and is the great eastern railway centre and commercial emporium. **Providence**, the capital of Rhode Island, is the second city in population, and has a large trade.

The chief manufacturing towns are:—In New Hampshire,—**Manchester** and **Nashua** (*woven fabrics*), **Concord** (*carriages*); in Massachusetts,—**Lowell** (*cottons and woollens*), **Fall River** (*prints*), **Lawrence** (*cottons, woollens and paper*), **Lynn** (*shoes*), **Holyoke** (*cottons and paper*); in Connecticut,—**New Haven**, **Bridgeport**, **Waterbury**, **Norwich** and **Meriden** (*rubber-goods, fire-arms, watches, clocks, plated-ware and sewing machines*).

New Bedford and **Gloucester** are fishing ports; **Springfield** is the seat of a United States arsenal; **Cambridge** is the seat of Harvard College, and **New Haven** of Yale College; **Newport** is a favorite watering place.

The **Middle Atlantic States** lie on or near the Atlantic Ocean, between New England and the Southern States.

They consist partly of the lowlands belonging to the Atlantic Plain and partly of the mountain ridges belonging to the Appalachian Highlands.

The coast is deeply indented with bays, which receive important rivers and furnish commodious harbors, as the Hudson, Delaware, Susquehanna, Potowmack and James, flowing into New York, Delaware and Chesapeake Bays.

The principal **Industries** are Agriculture and Mining.

A large part of the country receives special attention for garden produce and fruits for the supply of the great city markets. The hilly regions afford excellent grazing for sheep, and wool is an important product of these States.

The chief **Mineral Products** of this region are coal and iron, which abound in the Appalachian Highlands in Pennsylvania, Maryland, and West Virginia. Great quantities of petroleum are also obtained in Pennsylvania and West Virginia, and salt in New York.

Manufactures are extensively carried on, particularly in New York and Pennsylvania.

In **Commerce**, foreign as well as domestic, the Middle Atlantic States take the lead of all the others.

The great commercial cities of New York, Philadelphia and Baltimore ship to foreign markets vast amounts of grain and provisions constantly coming in from the west by the various railways or other channels; and distribute to all parts of the country imports from abroad. The coasting-trade and lake-traffic of this section are both extensive.

The Hudson River, navigable to Troy, is one of the great natural arteries of commerce, connected by the Erie Canal through the Mohawk Valley with Buffalo on Lake Erie; by the Erie and Oswego canals with Lake Ontario at Oswego; by the Champlain Canal with Lake Champlain and the Richelieu River at Whitehall; and by the Delaware and Hudson and the Morris Canal with the Delaware River.

New York is the metropolis of America. It is situated at the mouth of the Hudson River, on Manhattan Island. In manufactures as well as in commerce it is the leading city of the Union, and is noted for its noble harbor, and its numerous fine buildings. **Brooklyn**, on Long Island, and **Jersey City** in New Jersey, separated from New York by the East and Hudson Rivers respectively, may be considered as forming part of the city. Brooklyn is the third city for population in the Union, and is connected with New York by the greatest suspension bridge in the world; under this, large ocean ships can pass.

Buffalo, at the outlet of Lake Erie, is a leading lake-port, and is the western terminus of the Erie Canal. It is important as one of the centres of commerce between the east and west, and carries on an immense trade in grain, live-stock, lumber and coal. **Oswego**, on Lake Ontario, receives great quantities of grain and lumber from Canada and the west, and in return exports coal. **Albany** is the capital of New York State, and is an important lumber-market.

Philadelphia, in Pennsylvania, situated at the junction of the Schuylkill (*Skooy'-kill*) River with the Delaware, is the second city of the Union in population and extent of manufactures; it is the greatest coal depot in America. In Independence Hall, still preserved, the Continental Congress adopted the Declaration of Independence in 1776. **Pittsburg** has the most extensive iron and glass works in the country, and is a great market for bituminous coal and petroleum. **Paterson**, in New Jersey, has important silk manufactures.

Baltimore, in Maryland, is an important sea-port, and is a great market for flour, tobacco, and canned fruit and oysters. It is a port of call for the Allan (Canadian) line of steamships to Liverpool. **Richmond**, the capital of Virginia, has an extensive trade in iron manufactures and tobacco. **Norfolk** is a leading cotton-port, and has the best harbor south of the Potomac.

The **District of Columbia** is a tract of sixty-four square miles on the left side of the Potomac River,

ceded by the State of Maryland to the General Government as a site for the national capital.

The law-making power for the District is vested in Congress. The executive power is intrusted to three Commissioners appointed by the President. The residents of the District are neither represented in Congress nor are they entitled to vote.

Washington, in the District of Columbia, is the capital of the United States. It contains—the Capitol, where Congress meets; the White House, the residence of the President; and other fine buildings. Commercially, it is of small importance.

The Southern Atlantic States occupy a part of the low Atlantic Plain between the Appalachian Mountains and the ocean.

Swamps abound on the coast—the **Dismal Swamp**, extending from Southern Virginia into North Carolina, and the **Everglades** of Florida, are the most noted. They are infested with alligators, rattlesnakes, and other noxious reptiles, and are covered with dense vegetation of cedar, cypress, and creeping plants.

Agriculture is the leading Industry.

The pine forests of North Carolina yield large supplies of turpentine, pitch, tar, and rosin. The islands and coasts from South Carolina southward yield the most valuable cotton (*sea-island or long-stapled*). Rice is largely cultivated in the lowlands, which are subject to tidal overflow. Indian corn, wheat and tobacco are grown in the higher lands; and fruits—oranges, lemons, and bananas are grown in Florida.

Most of the labor on the plantations is performed by colored people, who constitute a large proportion of the population.

Manufactures are unimportant, and **Minerals** are still undeveloped.

The **Climate** on the coast is hot and damp, but in the higher regions is healthy and delightful.

Long summers and mild winters distinguish these states, and every winter many invalids from the north seek the balmy air of the Carolinas and Florida.

Charleston, in South Carolina, is the first rice-market in the United



States, and ships large quantities of cotton. **Savannah**, in Georgia, is the second cotton-port in the United States. **Pensacola** in Florida, on the Gulf coast, is an important sea-port. **Aiken**, in South Carolina, **St. Augustine** and the towns on the St. John's River in Florida are favorite winter resorts for invalids.

The Southern Gulf States occupy the low plain skirting the Gulf of Mexico.

From this plain the surface in Texas rises to a table-land diversified in the west with mountains; in the northern part of Alabama the Appalachian Chain of Mountains terminates.

The **Rivers** are generally sluggish and are navigable to the ridge through which they force their way from the uplands, where navigation is obstructed by falls or rapids.

The great river of this section is the **Mississippi**, navigable itself for 2,200 miles, and having not less than a hundred navigable tributaries, traversed by hundreds of river steamers. The **Missouri**, its principal tributary, is longer than the Mississippi, and like it is navigable almost to its sources. The waters of the lower Mississippi are heavily charged with earthy matter, mainly received from the Missouri. These deposits have, in the course of years, formed a vast delta, extending along the Gulf for a distance of 150 miles. The elevation of the delta is so slight that embankments, or *levées*, have been built along the Mississippi, Red and other rivers, to prevent them from overflowing the country during the annual floods, when the water is several feet higher than the surrounding country. There are 1,500 miles of such embankments in Louisiana. A *crevasse*, or break in a levee, sometimes causes great damage.

In the rice lands planters are allowed to cut, through the levees, openings called *flumes*, carefully guarded with gates, for the purpose of obtaining water. When the rice is ready for harvesting the water is drawn off.

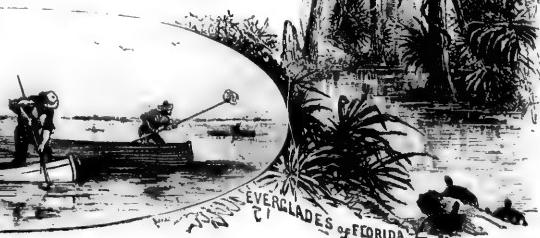
In the lower course of the Mississippi and Red Rivers many branches separate from the main stream and pass to the sea through flat lands in independent channels. These are named *Bayous* (*Blous*).

The chief **Products** of the Gulf States are cotton, corn, sugar, rice, cattle and sweet potatoes.

Southern Louisiana is the principal sugar region. Texas is the most important State in the Union for its cattle, horses and sheep; of cattle, more than four millions range on its fine pastures. Mississippi is the principal cotton state. The plains of Texas are called the "Llano Estacado" or "Staked Plain," from the stake-like stems of a plant which still grows there in abundance. A large part of the people of Louisiana are of French descent, and still to some extent speak the French language. In Texas many places retain their original Spanish names.

Texas is separated from Mexico by the Rio Grande River.

New Orleans, situated on the Mississippi 115 miles from its mouth, is the business metropolis of the South, and the emporium for the vast trade of the Mississippi. It is the third commercial city of the Union and the principal cotton and sugar market.



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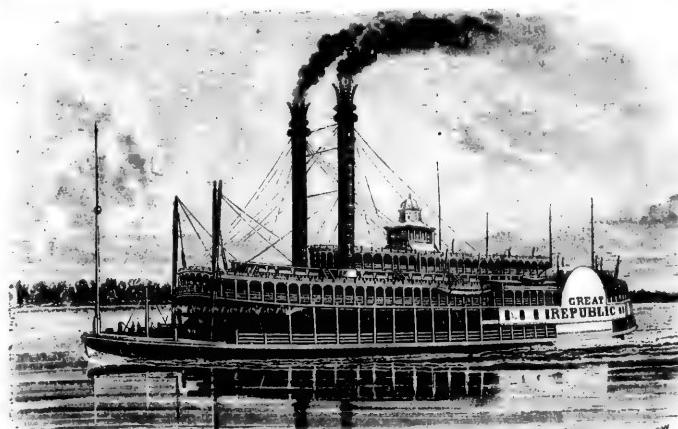
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MISSISSIPPI STEAMER.

Mobile (*Mo-bee'-lē*) in Alabama is a leading gulf port, and has an active export trade in cotton and lumber. **Galveston** is the chief port in Texas.

The **Southern Central States**, with the exception of Kansas, border on the Mississippi River. They all form part of the Great Central Plain.

Parts of Missouri and of eastern Kentucky and Tennessee are traversed by low mountain ranges—the **Ozark Mountains** in Missouri, and the **Cumberland Mountains** belonging to the Appalachian Chain in the east.

The leading **Industry** of this section is agriculture and cattle-raising.

In the most southerly states—Arkansas and Tennessee—cotton and corn are the staples; farther north—hemp and tobacco; and in Kansas—corn, wheat and cattle.

Kentucky is celebrated for its horses, mules and cattle. The "blue grass" region, traversed by the Licking and Kentucky Rivers, affords the best of pasture. It also produces more hemp and tobacco than any other state in the Union.

Missouri has valuable iron and lead mines in the Ozark Mountains.

Louisville, in Kentucky, on the Ohio, is the most important tobacco market in the States. **St. Louis**, in Missouri, is the metropolis of the whole Mississippi valley. Situated near the junction of the Missouri with the Mississippi, it is a leading centre of internal commerce by water and also by rail. **Memphis**, in Tennessee, is one of the largest cities on the Mississippi.

The **Northern Central States** lie wholly in the Great Central Plain; five border on the Great Lakes.

The **Surface** is generally level or gently undulating, and for the most part is prairie land.

Michigan, Wisconsin, Indiana and Minnesota, in the region adjoining the Great Lakes, contain large tracts of valuable timber-lands, and Michigan ranks first among the States in the production of sawed lumber.

The **Prairie-lands** are unsurpassed in fertility. They are generally destitute of timber, except in the bottom-lands of the streams by which they are watered.

Minnesota, Wisconsin and Michigan, like Ontario, contain many small lakes.

Agriculture is the chief **Industry**.

The natural advantages of a rich soil, ample facilities for internal commerce by railways and navigable streams, and valuable water-power, make this section one of the most valuable in the Union.

It forms a part of the great wheat belt which extends into Canada; the manufacture of flour is an important industry.

Corn is raised in enormous quantities, but most of the crop is used for feeding live-stock. Vast numbers of cattle and hogs are raised and sent to the Eastern States or to Europe.

Ohio produces a large quantity of coal and wool, and is the leading state west of the Appalachian Mountains for manufactures. Two systems of canals connect Lake Erie with the Ohio River, and a canal connects Chicago on Lake Michigan with Peru at the head of steamboat navigation on the Illinois River, a tributary of the Mississippi.

In the north of Michigan on the shores of Lake Superior are valuable **Mines** of copper and iron; in the Black Hills in Dakota, gold is found; in Iowa, Indiana and Wisconsin—coal, iron and lead.

Nearly all the largest cities in the United States west of Atlantic tide-water are to be found in this section or closely adjoining.

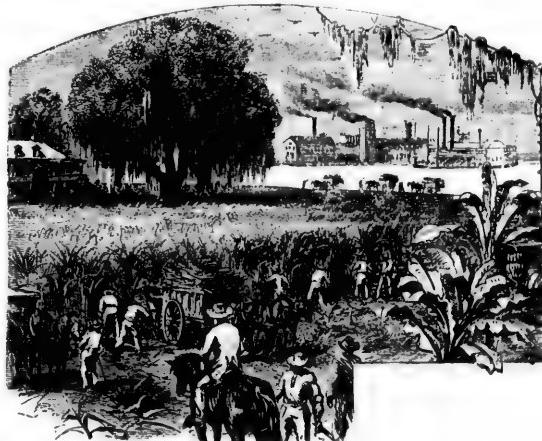
Minnesota occupies the crest of the Great Central Plain or **Height of Land**, from which the waters flow by the Red River of the north through Canada into Hudson Bay; by Lake Superior and the St. Lawrence into the Atlantic Ocean, and by the Mississippi into the Gulf of Mexico. The highest elevation is about 1,700 feet above the sea.

The boundary separating this section from the Dominion of Canada is formed by the 49th parallel of latitude, the Lake of the Woods, Rainy River, Rainy Lake, Crooked Lake and Pigeon River.

In Ohio, **Cincinnati**, one of the largest cities of the west, has extensive manufactures, immense pork-packing establishments, and large domestic commerce. **Cleveland** and **Toledo** are important ports on Lake Erie, and have a large trade with Canada.

Indianapolis, the capital of Indiana, is the largest city of the Union not on navigable waters, and is a great railway centre.

Chicago, in Illinois, the metropolis of the west, situated at the head of Lake Michigan, is surpassed only by New York for commerce. It is the greatest grain market, and the chief pork packing city and emporium for live-stock in the United States.



SUGAR PLANTATION

Detroit, in Michigan, on the river of the same name, is the centre of the railway system connecting Canada with the western states. It carries on a large shipping and manufacturing trade.

Milwaukee, the principal city of Wisconsin, receives and ships vast quantities of grain.

St. Paul and **Minneapolis** are the principal cities of Minnesota, and carry on an extensive trade with the North-West. The Falls of St. Anthony on the Mississippi furnish Minneapolis with unsurpassed water-power.

Omaha, on the Missouri River, is the largest city in Nebraska, and is the terminus of the Union Pacific Railway.

Saginaw, in Michigan, ships large quantities of salt.

Colorado and the **Rocky Mountain Territories** embrace part of the High Western Plain and extend across the Rocky Mountains to the plateau between them and the **Sierra Nevada Mountains**.

This is the most elevated part of the United States, and the mountain regions are remarkable for their canyons, long narrow gorges worn by the rivers to a great depth in the table-land, and forming almost perpendicular walls, between which the river rushes through the dark abyss. The **Grand Canon of the Colorado**, in Arizona, is 217 miles in length; its walls rise perpendicularly to a height of 3,000 feet or more above the river.

As the mountains near the coast deprive the winds of the Pacific of their moisture, **Agriculture** can only be carried on by irrigation; and in settled districts this is done by channels cut through the adjacent country to streams, often many miles distant. In some sections where "bunch grass" is found, stock-raising is an important interest. In New Mexico it is the principal pursuit.

The extensive fertile valleys of Colorado are called "Parks."

Mining is the principal **Industry**, and in the Rocky Mountain region gold and silver are widely distributed and are chiefly sought after.

Colorado produces more silver than any other State, and Montana is next to California the most productive in gold.

Utah is inhabited principally by a peculiar sect, called Mormons, or Latter Day Saints; **New Mexico**, by a mixed race descended from civilized Indians and the original Spanish settlers, speaking the Spanish language.

Denver in Colorado, at the junction of several railways, is the principal city. **Leadville**, situated nearly 11,000 feet above sea-level, derives importance from its rich mines.



GRAND CANON OF COLORADO.

and other places, it is the commercial metropolis of the Pacific coast.

Sacramento is the capital of California.

Virginia City in Nevada is famous for its rich silver-mines.

Indian Territory is a country set apart by the Government as a home for certain Indian tribes, most of whom once resided east of the Mississippi. It has no organized government. **Tahlequah**, the capital of the Cherokee Nation, is the chief town.

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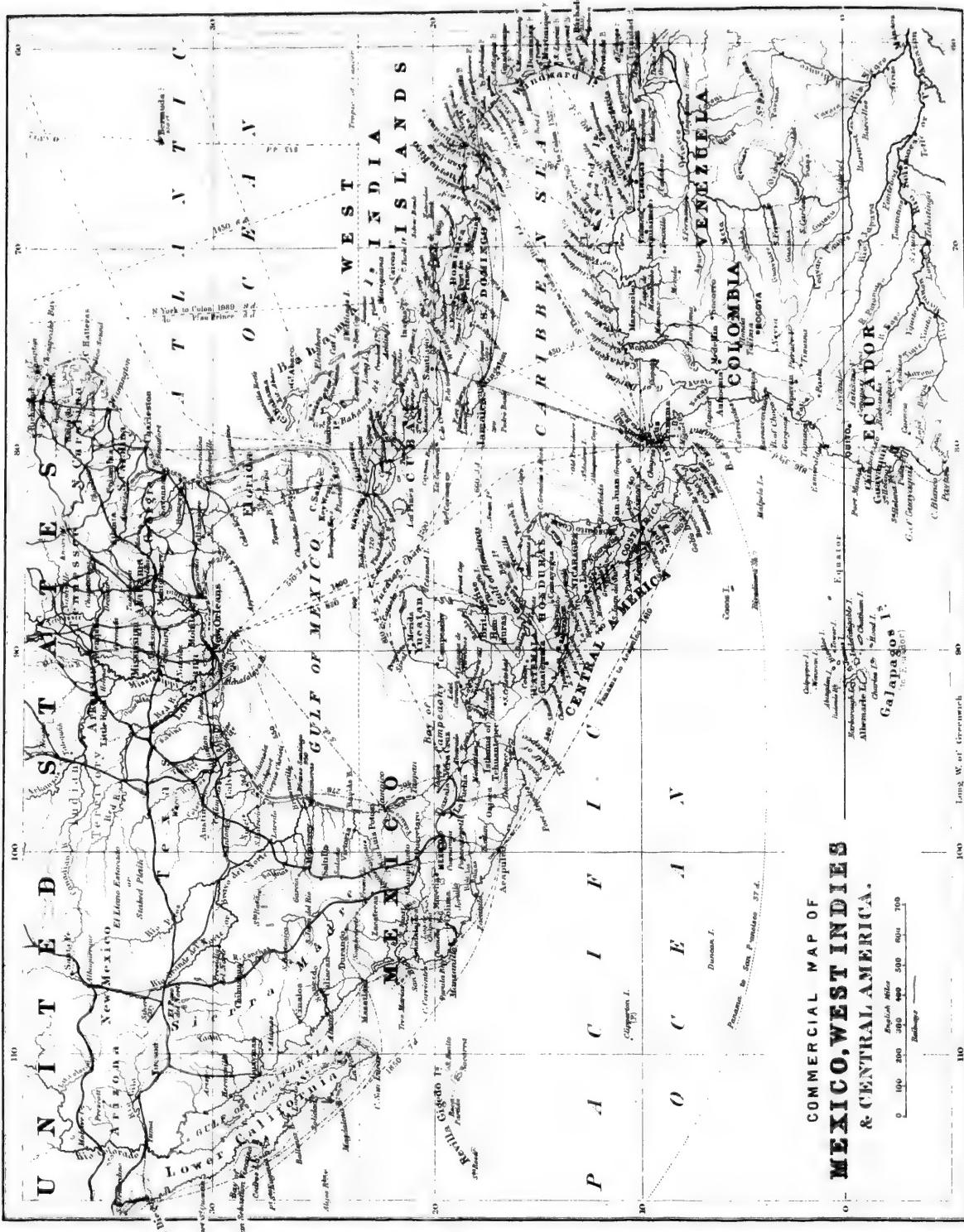
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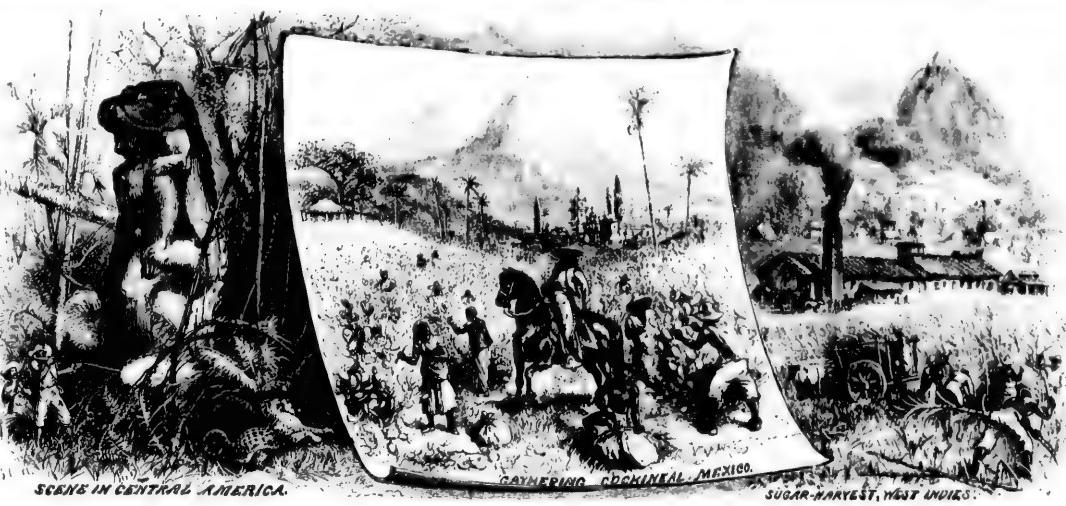


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MEXICO, CENTRAL AMERICA, AND THE WEST INDIES.

QUESTIONS ON THE MAP.

Mexico.—What country is north of Mexico? What river forms part of the boundary? What country is south-east? What peninsula is in the north-west? What gulf separates it from the mainland? What gulf is east of Mexico? What bay? What peninsula is in the south-east? What cape forms the most northerly point? What isthmus is in the south-east? What gulf? What mountain chain extends through Mexico? Of what chain is it a continuation? What city is the capital? Name three sea-ports on the eastern coast. One sea-port on the Pacific. Which city is near the mouth of the Rio Grande? What city is south-east of Mexico? What city is on the Santiago River? What city is north-east of Guadalajara? East? What city is in the north on the Rio Grande? What city is south of El Paso?

Central America.—Name the Divisions of Central America? Which is farthest south? What country of South America does it adjoin? Which is farthest north? What British Colony is north-east of Guatemala? What is the capital? What state is wholly on the Pacific coast? What bay is north of Honduras? What cape forms the most easterly point? What name is given to the eastern coast of Nicaragua? What two lakes are in Nicaragua? Name the capitals of each state.

The West Indies.—What are the three principal divisions of the West Indies? (*Bahamas, Greater Antilles, Lesser Antilles.*) Name the four islands of the Greater Antilles. Into what two groups are the Lesser Antilles divided? Which is the most easterly? What group is near the South American coast? What small group east of Porto Rico? What group of islands is north of Cuba? What town is the capital? On what island? What city is the capital of Cuba? What city is east of Havana in Cuba? On the south-eastern coast? How is Cuba separated from Florida? From Yucatan? From San Domingo? How is San Domingo divided? What is the chief town of Hayti? Of Dominica? How is San Domingo separated from Porto Rico? What is the chief town of Porto Rico? What island is nearly west of Hayti? What is the capital? What other city is in Jamaica? What mountains are in Jamaica? What large island is the most southerly of the West Indies? What is the capital of Trinidad? Which is the principal island of the Leeward Islands? Its chief town? What three large islands are between Antigua and Barbados? Which is the principal of the Windward Islands? Its chief town?

Travels.—What is the principal port of call for steamers coming to the West Indies? What lines run from the West Indies to the mainland? What are the ports of call between Panama and San Diego? What telegraph cables connect Aspinwall with the United States? Through what islands do they pass?

REVIEW EXERCISES.

Countries.—Where is it? How bounded? What is the capital?

Mexico? British Honduras (*Belize*)? Guatemala? Honduras? San Salvador? Nicaragua? Costa Rica? Mosquito Coast? Dominica? Hayti?

Islands.—Where situated?

Bahamas? Greater Antilles? Cuba? San Domingo? Jamaica? Porto Rico? The Lesser Antilles? The Virgin Islands? The Windward Islands? The Leeward Islands? New Providence? Trinidad? Venezuelan Islands? Antigua? Barbados? Guadalupe? Dominica? Martinique?

Peninsulas.—From what country does it project? Into what waters, or between what waters?

Lower California? Yucatan?

Capes.—From what coast does it project?

San Diego? San Lucas? Catoche? Gracias a Dios?

Isthmuses.—What countries does it connect?

Tehuantepec? Panama?

Mountains.—In what part of the country are they? In what direction do they extend?

Sierra Madre? Blue Mountains?

Gulfs and Bays.—Where is it?

California? Mexico? Campeachy? Honduras? Tehuantepec?

Straits.—Between what lands? What waters does it connect?

Yucatan? Florida? Windward? Mona?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what water?

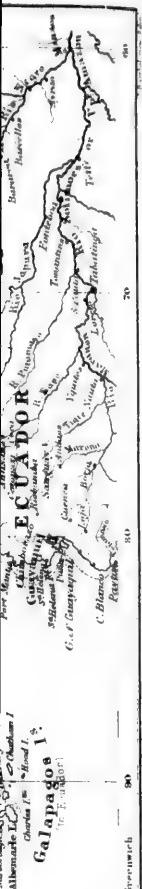
Rio Grande? San Juan?

Lakes.—Where situated? What outlet?

Nicaragua? Managua?

Cities and Towns.—In what part of the country? How situated?

Mexico? Guadalajara? Guanajuata? Zacatecas? El Paso? Chihuahua? Puebla? Vera Cruz? Tampico? Matamoras? Acapulco? Guatemala? San Salvador? Managua? Tegucigalpa? San José? Belize? Havanna? Matanzas? Santiago de Cuba? San Juan? Kingston? Spanish Town? Port of Spain (*Trinidad*)? St. John (*Antigua*)? Bridgetown (*Barbados*)? Nassau (*Bahamas*)? Hamilton (*Bermuda*)? San Domingo? Port au Prince?



MEXICO.

GENERAL DESCRIPTION.

Mexico occupies the southern portion of North America between the Gulf of Mexico and the Pacific Ocean; it also includes the Peninsula of Lower California and part of the Peninsula of Yucatan.

In Extent it is rather more than one-fifth the size of Canada, but contains more than double the number of inhabitants.

The Surface of Mexico consists principally of lofty table-lands, a continuation of the North American Plateau Belt, which here reaches its highest elevation (8,000 feet).

This is bordered on the east and west by mountain chains having the same trend as the Pacific coast. Both coasts are skirted by narrow lowland plains. The Peninsula of California is traversed by a ridge sloping abruptly to the water on either side.

Across the highest (the southern) part of the Mexican Plateau there extends from east to west a series of Volcanoes, three of which rise above the snow-line.

The loftiest of these volcanoes, *Popocatepetl* (see Illustration, p. 24), or Smoking Mountain, is the second mountain in North America in height; it emits smoke, but has had no eruption for 340 years. Within its crater, which is a mile across and 1,000 feet deep, are enormous beds of pure sulphur. For the purpose of obtaining this mineral, several persons make their abode in the crater, ascending and descending its walls with the aid of ropes.

Jorullo (*Yo-rool-yo*), another volcano of this chain, is remarkable for having been thrown up in a single night (in 1759) from fertile fields of sugar and indigo to a height of 1,600 feet above the level of the plateau. Jorullo is further from the sea than volcanoes usually are; it is now nearly extinct.

The Climate and Productions of Mexico present great variety according to the difference in the elevation of the land.

The Lowlands of the coast are hot, damp and unhealthy, yellow fever being a frequent visitant; here, the productions are tropical, and the banana and plantain are largely used for food.

Next in elevation are the Temperate Regions, "the Paradise of Mexico," to which most of the interior plateau belongs. The climate is here free from extremes, healthy, and delightful. At different heights, sugar-cane, cotton, coffee, indigo, maize (the most important grain of Mexico), tobacco, wheat, and luscious fruits flourish abundantly.

The Cold Regions embrace the loftiest table-lands and the mountainous districts, where the climate is severe and the soil less productive. The country is almost covered with a dense growth of hard and thorny bushes, called mesquit, chapparal and chimal.

The plateaus north of the Tropic of Cancer are dry and barren; south of it, the year is divided into a dry and a rainy season, the latter beginning in May, and lasting from four to five months. During the dry season violent Norther, or gales from the north, frequently sweep across the Gulf of Mexico.

Among the Special Products of Mexico are *vanilla*, the fruit or pod of a climbing plant; the beans of the *cacao-tree*, from which chocolate is made; the *agave*, from the juice of which a wine called *pulque* (*pull'-kay*) is made, and *sisal*, similar to hemp, from the fibres of which cordage and bagging are made.

The cactus abounds in Mexico; and one variety is cultivated in large plantations for the sake of the cochineal insect which lives upon the leaves,

and which, when dried, yields the most brilliant crimson dye. The mode of gathering the insects is shown in the engraving, p. 37.

Wine, olive-oil, and tobacco are important products; and the forests yield rosewood, mahogany and dye-woods.

The Minerals of Mexico are inexhaustible. The silver-mines of the Sierra Madre have been the most productive in the world, and still yield a large part of the world's supply; gold, tin, quicksilver and iron are also abundant.

The leading Industries are agriculture, stock-raising, and silver-mining.

Large ranches or farms with 20,000 to 30,000 head of cattle are common. Mules are numerous. Mustangs, sprung from the horses introduced by the Spaniards, rove in wild droves over the northern highlands.

Manufactures are unimportant, and are chiefly confined to sugar, tobacco, saddlery, earthen-ware, and other articles for home use.

Foreign Commerce, carried on mainly with Great Britain the United States, and France, is limited.

This is due in part to the difficulty of transportation; for, except between the principal cities, goods are carried by pack-mules or in ox-carts. The rivers are only navigable a short distance from the sea. No navigable streams penetrate the interior, and the routes from the interior plateau to either coast across the mountains present many obstacles to traffic.

An extended system of railways is now, however, in course of construction, and through the interior plateau about 2,000 miles are in operation.

The chief Exports are silver, dye-woods, cochineal, and vanilla.

The Inhabitants are chiefly in the southern part of the country, and consist of:—*Crooles*, or white natives, descended from the early Spanish colonists, forming nearly one-tenth of the population; *Indians*, comprising two-thirds; and *Mestizos*, half-breeds, derived from the union of whites and Indians.

The Spanish language prevails, but among the Indians fifty distinct tongues are still spoken. The people are generally indolent, and education is neglected except in some of the larger towns.

All Religions are tolerated, but most of the inhabitants are Roman Catholics. Among the Indians are some Pagan tribes.

Mexico is a Republic, composed of twenty-seven States, the Territory of Lower California, and the Federal District containing the capital. The Constitution resembles that of the United States, but the Government is unstable in its character, and revolutions have been frequent. It was for three centuries the most important colony of Spain, but gained its independence in 1821.

Mexico, the capital and metropolis, is a handsome city, situated in the midst of the most sublime mountain scenery; it is nearly a mile and a half above sea-level.

Guadalajara, Puebla, and Guanajuato are the most important cities of the table-land.

Vera Cruz, a sea-port on the Gulf of Mexico, is connected with the capital by a railway, and is the chief seat of foreign commerce. Acapulco is the principal port on the Pacific.

CENTRAL AMERICA.

Central America is a long isthmus, occupying the southern extremity of North America, between the Caribbean Sea and the Pacific Ocean.

In Extent, it is about the same as the Province of Quebec, but contains about double the number of inhabitants.

Central America includes five independent republics, which are really military despotisms, and the British Colony of Belize or British Honduras.

The Surface consists mainly of table-land of moderate height, bordered on the Pacific Coast by a mountain range, which con-

tains many active volcanoes. From the mountains on the west the surface descends by successive terraces eastward to the shore of the Caribbean Sea, which is low, like that of the Gulf of Mexico.

Volcanic eruptions occur from time to time, and earthquakes are frequent and destructive.

The Rivers, like those of Mexico, are navigable but a very short distance. The San Juan River and Lake Nicaragua are the most important navigable waters.

The Climate, Soil and Vegetation are very similar to those of Mexico, but the great natural advantages of the countries of Central America are almost wholly unimproved.

The chief Products are valuable cabinet and dye-woods; coffee, cocoa, indigo, and cochineal. Maize is the principal grain. The precious metals—gold and silver—are abundant, but the mines are little worked.

The Foreign Commerce is chiefly with Great Britain and the United States.

The Exports are coffee, indigo, cochineal, sheep-skins, India-rubber, and silver.

The Inhabitants are mostly Indians and Mestizos, except in Costa Rica and Belize. The white race is chiefly of Spanish descent. The Roman Catholic Religion prevails.

Interesting remains, consisting of ruined temples, sculptured idols, tablets covered with carved figures, etc., the work of the aboriginal inhabitants, are found in different parts of Central America (*see engraving, p. 57*.)

The capitals of the different republics are the principal towns (*see Reference Table, p. 60*), but are of small importance.

Belize, or British Honduras, is a small British Colony situated between Mexico, Guatemala, and the Caribbean Sea. It derives its chief importance from the export of logwood and mahogany. The interior is little known.

Belize is the principal town. A submarine cable connects it with Cuba; and lines of steamers run between Belize and London, New Orleans, and New York.

THE WEST INDIES.

The West Indies consist of about a thousand islands; they vary greatly in size, and extend in a curve from the Peninsula of Florida to the South American coast, enclosing the Caribbean Sea.

These islands are the summits of mountain ranges which are partly under the sea, and are parallel to the great chains of the western continent.

The Extent of the land surface is nearly equal to that of Ontario, but the Population exceeds that of the whole Dominion.

The Archipelago is divided into three principal groups—the Bahamas, the Greater Antilles, and the Lesser Antilles.

The Bahamas, the most northerly group, consist of about twenty inhabited islands and an immense number of islets and rocks. They are low, coral islands, hardly more than six to ten feet above high water, and rest upon an extensive bank of coral, which rises, with nearly perpendicular walls, from a great depth.

One of them, San Salvador, is said to be the first land discovered by Columbus in 1492.

One of the chief branches of Industry is the sponge-fishery. Turk's Island yields salt, formed by the evaporation of sea-water collected in lagoons.

The Greater Antilles have forest-clad mountains and a fertile soil.

Each of the Greater Antilles is crossed, in the direction of its length, by mountain ranges, which vary in elevation from 2,000 to 5,000 feet, rising in Jamaica to 7,300 feet, and in Hayti to over 8,000 feet. Each also contains plains, considerable portions of which are table-land.

They comprise the largest islands—Cuba, Porto Rico, Jamaica, and Dominica. Their products are sugar, molasses, rum, tobacco, cocoa, coffee, indigo, and tropical fruits—oranges, bananas, tamarinds, pine-apples, etc. Cuba and Porto Rico are noted for sugar and tobacco; and Jamaica for rum, ginger, and allspice.

The Lesser Antilles include all the islands between Porto Rico and South America, and are known also as the Windward and Leeward Islands.

The Caribbean or Windward Islands, excepting Anguilla, Barbuda and Barbados, are almost wholly of volcanic origin. Guadalupe and St. Vincent

contain active volcanoes, while the others contain many craters nearly or quite extinct. Trinidad contains a remarkable asphalt lake. Barbados is the most densely populated region in the world, having an average of 1,035 persons to the square mile.

The West India islands, except the Bahamas, are well supplied with Springs, and with Streams and Lakes of small size, but even the Greater Antilles have no Rivers which are navigable farther than a few miles from the sea. In the Bahamas, water is obtained by digging wells.

All these islands, except a portion of the Bahamas, are within the Torrid Zone; the Climate is therefore tropical, but the intense heat is modified by the surrounding ocean and by the trade-winds.

Being north of the Equator, the summer is the season of rain. In Cuba and the more northern islands the greatest amount of rain falls in May, June, and July; in the more southerly islands the heaviest rains are in August and September.

The Soil is generally rich and productive, and agriculture is the Leading Occupation throughout the Archipelago.

Cuba, Jamaica and Porto Rico greatly surpass the other islands in the amount and variety of their agricultural productions.

The principal Products are sugar, molasses, rum, coffee, tobacco, cotton, and tropical fruits, which are also the chief Exports. This is the great sugar-producing region of the world.

Commerce is chiefly with Great Britain and the United States.

Lines of steamers connect Havanna with New York and New Orleans; others connect Jamaica and other islands with Liverpool. St. Thomas is the principal port of call for the European as well as the North and South American steamship lines. Submarine cables connect Jamaica with many of the other islands and with North and South America.

The greater part of the Population is composed of negroes, formerly slaves brought from Africa, or their descendants, but who are now free. The white inhabitants are generally of the same race as the nation to whom the island belongs, and their language is there spoken.

The West Indies are chiefly owned by European powers (*see Reference Table, p. 60*).

Cuba and Porto Rico are colonies of Spain; the government is administered by a Captain-General appointed by Spain.

Jamaica, the **Bahamas**, and most of the **Lesser Antilles** belong to Great Britain; some small islands in the Lesser Antilles belong to France, Denmark and Holland.

The British Islands form separate colonies, each under a Governor appointed by Great Britain—**Jamaica**, the most important, including Turk's and Caicos Islands. **Trinidad**, the most southerly island; the **Leeward Islands**, forming part of the Lesser Antilles, and including Antigua, Barbuda, Montserrat, St. Christopher, Nevis, Dominica, and the Virgin Islands; the **Windward Islands**, also forming part of the Lesser Antilles, comprising Barbados, St. Vincent, Grenada, Tobago, and St. Lucia; and the **Bahamas**.

Hayti or **Dominica** was once divided between France and Spain.

It now consists of two independent negro republics—**Hayti** and **San Domingo**. Both governments are unsettled, and, owing to the disturbed political condition, the great natural wealth of the island is almost wholly undeveloped.

Havanna, the capital of Cuba, is the largest city in the West Indies and the greatest sugar-market in the world; **Matanzas** and **Santiago de Cuba** are important cities. **San Juan** is the

principal city of Porto Rico. **Kingston**, the capital of Jamaica, is the chief commercial port of the British West Indies. It exports large numbers of turtles from the neighboring coasts and islands. **Port of Spain**, the capital of Trinidad, is one of the finest towns in the West Indies, with a magnificent harbor. **Nassau**, the capital of the Bahamas, is a favorite winter resort, on account of its salubrious climate. **Port au Prince**, in Hayti, exports coffee, tobacco, mahogany, and campeachey wood.

The **Bermudas** are a cluster of about one hundred small islands (of which only fifteen or sixteen are inhabited, the rest being mere rocks), situated in the Atlantic Ocean, about 650 miles east of Cape Hatteras in North Carolina. Bermuda possesses a strongly fortified dock-yard, and is a British naval station. The government is vested in a Governor and Executive Council appointed by the Crown, and a Legislative Assembly.

Hamilton is the chief town and seat of Government.

NORTH AMERICA—STATISTICAL REFERENCE TABLE.

COUNTRY.	AREA IN SQ. MILES.	POPU- LATION.	PEOPLES TO A Sq. MILE.	CAPITAL.	POPU- LATION.	PRINCIPAL EXPORTS.
Danish America—						
Iceland.....	41,914	72,438	2	Reikjavik.....	.....	Eider-down, wool, Iceland moss, stock-fish.
Greenland.....	600,000 ¹	10,000	.....	Upernivik.....	.....	Seal, reindeer-skins, whale and seal oil.
" (free from ice).....	35,240 ¹	.....	.....	Ottawa.....	27,412	Lumber, grain, cattle.
Dominion of Canada (1881)—	3,470,392	4,324,810	1	Toronto.....	80,415	Grain, cattle, lumber, timber.
Ontario.....	101,733 ¹	1,923,228	9	Quebec.....	62,446	Timber, fish.
" (Disputed Ter.).....	100,000 ¹	.....	.....	Fredericton.....	6,218	Lumber, fish.
Quebec.....	188,688	1,350,927	7	Halifax.....	36,054	Fish, lumber, coal, potatoes, ships.
New Brunswick.....	27,174	342,333	12	Charlottetown.....	11,485	(Potatoes, oats, ships, cattle, and canned lobsters.
Nova Scotia.....	20,907	440,574	21	Winnipeg.....	25,000 ¹	Cattle, grain.
Prince Edward Island.....	2,133	105,891	50	Regina.....	2,500 ¹	.....
Manitoba.....	123,200	65,054	.....	Victoria.....	5,945 ¹	Gold, coal, fish, timber.
N. W., N., and N. E. Territories.....	2,505,252	59,410 ¹	.....	St. John's.....	21,000 ¹	Dried cod-fish, cod and seal oil, seal-skins.
British Columbia.....	341,305	49,459 ¹	.....	St. Pierre.....	.....	" " " "
Newfoundland—	40,200	179,500	4 ¹ ₂			
St. Pierre and Miquelon (French).....	95	5,224	55			
United States—						
States and Territories.....	2,054,450	50,155,783	17 ¹	Washington.....	147,203	Grain, cattle, cotton, tobacco, sugar, rice.
Indian Territory.....	5,740	179,232	.....		
Alaska.....	577,390	30,150 ¹	.....		
Mexico—	741,820	9,787,629	13	Mexico.....	241,110	Silver, dye-woods, cochineal, vanilla.
Central America—						
Guatemala.....	40,777	1,252,497	30	Guatemala.....	55,728 ¹	
San Salvador.....	7,335	554,785	62	San Salvador.....	14,059 ¹	
Nicaragua.....	58,000	300,000 ¹	5	Managua.....	12,000 ¹	Cabinet and dye-woods, coffee, indigo, cochineal, sheep skins, India-rubber, silver.
Honduras.....	47,092	350,000 ¹	7	Tegucigalpa.....	12,000 ¹	
Costa Rica.....	21,495	185,000 ¹	8	San Jose.....	12,000 ¹	
British Honduras.....	7,562	27,452	3 ¹ ₂	Belize.....	5,767 ¹	
West Indies—						
British Colonies—						
Jamaica.....	4,193	580,804	140	Kingston.....	35,000 ¹	
Turk's and Caicos.....	223	4,778 ¹	21			
Trinidad.....	1,754	155,128 ¹	88	Port of Spain.....	31,858 ¹	
Leeward Islands.....	703	119,516 ¹	170	St. John (Antigua).....	18,700 ¹	Rum, ginger, allspice, sugar, coffee, tobacco, cotton, tropical fruits, turtles.
Windward Islands.....	830	312,686 ¹	377	Bridgeport (Barbados).....	20,947 ¹	
Bahamas.....	5,390	43,521 ¹	8	Nassau (New Providence).....	.....
Bermudas.....	41	14,434 ¹	354	Hamilton.....	.....
Spanish—						
Cuba.....	47,532	1,424,649	30	Havana.....	230,000 ¹	
Porto Rico.....	3,726	754,313	204	San Juan.....	18,132 ¹	Sugar, tobacco, tropical fruits.
Danish (see p. 66).....	140	33,703 ¹	241	St. Thomas (St. Thomas).....	.....
French (see p. 73).....	1,142	358,233 ¹	314	Basseterre (Guadalupe).....	.....
Dominica (Hayti).....	9,570	550,000 ¹	57	Port au Prince.....	27,000 ¹	Rum, sugar, molasses, coffee, indigo, tropical fruits.
(San Domingo).....	21,340	300,000 ¹	14	San Domingo.....	16,000 ¹	
TOTAL	8,746,086	72,065,361	8			

* The population of Canada in 1881 comprised 1,298,929 of French descent, 957,403 Irish, 881,301 English, 699,863 Scottish, 254,319 German, and 254,319 of other nationalities. Of these, 2,422,285 were Protestants, and 1,791,982 Roman Catholics.

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ANIMALS OF SOUTH AMERICA.

At the top of the column, on the left, is shown the jaguar, the largest of American carnivorous animals. He is crouched on the branch of a tree in a tropical forest, trying to provide himself with his favorite repast; the monkeys keep just out of reach. Such is the strength of the jaguar that he can even drag away a horse with comparative ease.

Passing down the column, we have first, breaking the circle, two peccaries, formidable antagonists, small as they are, with their fierce tempers and lancet-like tusks. Next comes the llama, a native of the slopes of the Andes, domesticated and used as a beast of burden by the Peruvians; it is adapted to mountain-traveling, and can carry a hundred pounds fifteen miles a day. Below is a group of chinchillas, from which we procure the delicate gray fur so called. They inhabit the higher districts of Chili and the adjacent countries. At the bottom of the column, the savages of Patagonia are hunting the rhea, or American ostrich, with the *bo'la's (balls)*, the use of which they are remarkably expert.

On the right of the jaguar are the flamingo and the ta'pir, widely distributed

through the moist tropical forests east of the Andes. The terrible boa-constrictor of the Brazilian woods is preparing to swallow a frightened capibara, or water-hog; the boa is from twenty to thirty feet long, and kills its victims by winding around them and crushing them in its folds.

On the extreme right we have the armadillo, with its suit of plate armor composed of horny scales; the ant-eater, which feeds on insects conveyed to its mouth by its long, flexible tongue, resembling a great red earth-worm; and the chattering toucan of the Amazon forests, admired for its brilliant plumage.

PHYSICAL SOUTH AMERICA.

I.—GENERAL DESCRIPTION.

South America forms the southern part of the Western Continent. It lies south-east of the mainland of North America, with which it is connected by the Isthmus of Panama. Three-fourths of the continent lie within the tropics. In size it ranks fourth among the Grand Divisions; in population, sixth.

The area is about 6,700,000 square miles, and population about 27,500,000. Its greatest width, which is attained a few degrees south of the Equator, is 3,250 miles; and its greatest length is 4,700 miles. It is about twice the size of the Dominion of Canada.

In Outline, South America is very compact, especially on the Pacific side, having nowhere any great indentations in the coast.

The Coast-line is about 16,500 miles in length, or only a little more than half that of North America, although the latter is but little greater in extent.

The great Rivers of South America—the Amazon, the Orinoco, the Rio de la Plata, and their tributaries,—form an important feature of the country, and afford excellent facilities for commerce.

The Amazon and its branches are said to furnish 50,000 miles of navigable waters, on some of which steamers now make regular trips.

The Natural Advantages possessed by South America are:—its valuable vegetable products, such as coffee, cocoa and sugar; its dense forests of valuable timber, such as rosewood, mahogany, India-rubber, and cinchona trees; its immense pasture plains, affording subsistence to vast herds of cattle; and its rich mines of gold, silver, and precious stones.

Although possessing these advantages, the people, like all inhabitants of tropical countries, are generally indolent and slow in making progress. The roads are poor, and there are only about 7,000 miles of railway in the whole of this grand division.

II.—QUESTIONS ON THE MAP.

Outlines.—What oceans wash the shores of South America? How is it connected with North America? What sea is on the north-west? What islands are to the north? To the south? To the west? How does the shape of the continent compare with North America? What strait is in the south? From what does it separate the continent? Name the most northerly capes. The most easterly. The most southerly. The most westerly. What ocean currents wash the shores of South America on the north? On the east? The south? The west?

HIGHLANDS.—What are the three great highlands? To what may they be compared in North America? Along which coast is the belt of highest mountains and narrow plateaus? What name is given to the broadest part of the plateau of the Andes? What lakes are in it? What mountains are in the Plateau of Guiana? Of Brazil? In what part of South America are the volcanoes?

LOWLANDS AND DRAINAGE.—What name is given to the northern part of the Great Central Plain? What rivers drain the Llanos? What name is given to the middle part of the Great Plain? With what are they covered? What river drains the Selvas? Name its branches. What island is at its mouth? Where do its head streams rise? What river is east of Joannes Island? What name is given to the southern part of the Great Plain? What river drains a large part of the Pampas? What are its principal branches? What rivers in North America nearly correspond with the Magdalena, Orinoco, Amazon and La Plata? What branch of the Amazon is connected with the Orinoco? What branches drain the Plateau of Brazil? What branches of the Para? What rivers drain the eastern part? What two the southern part? Which of these is the main river? What name is given to the forest region between the Paraguay and the Madcira? To the plain between the Matto Grosso and the Pampas? Where is the rainless coast? How far does it extend?

Geographical Circles, etc.— Through what part of South America does the Equator pass? Through the mouth of what river? Over what islands in the Pacific? In what zone is the greater part of the continent? What tropic crosses it? Through how many degrees of latitude does South America extend? Through how many degrees of longitude?

Products.—What valuable woods are obtained from the forests of the Amazon and its branches? What animal products are derived from the Llanos, Pampas and southern Brazil? What valuable manure from the rainless coast? From what islands is it obtained? In what parts of South America is gold found? Silver? Copper? Diamonds? Other precious stones? In what parts is coffee produced? Cotton? Sugar? Tobacco? Pepper? Cocoa? Rice? Cinchona? Caoutchouc (India-rubber)?



PHYSICAL VIEW OF SOUTH AMERICA.

III.—SURFACE AND DRAINAGE.

South America is naturally divided into four great regions:—the **Western Highland** of the Andes; the **Northern Highland** of Guiana, the **Eastern Highland** of Brazil; and the **Great Central Plain**, comprising the *Llanos* of the Orinoco, the *selvas* of the Amazon, and the *pampas* of La Plata and Paraguay.

The **Western Highland** consists of the Andes Mountains, which extend along the whole of the western coast in one, two or three gigantic parallel ranges rising from a broad table-land, and enclosing elevated plateaus.

The Andes form the longest unbroken mountain-system on the surface of the earth, and, with the exception of the Himalayas in Asia, contain the highest peaks. They have a breadth of from 200 to 300 miles, in the wider parts of the range, and reach their greatest altitude near the centre of the system in Bolivia, where several summits are nearly 25,000 feet high. Mount Sorata or Illampu is 24,812.

The outer ranges are called the *Eastern* and *Western Cordilleras*, and they enclose lofty valleys or plateaus from 8,000 to 13,000 feet above the level of the sea. They are usually narrow, but in the Plateau of Bolivia, extend to a width of 200 miles.

The Andes contain several groups of **Volcanoes**, the most noted of which are Chimborazo, Cotopaxi, and Aconcagua (22,452 feet), and the whole region is subject to terrific earthquakes, which sometimes destroy entire cities.

The **Passes** of the Andes are steep and dangerous; some of them are about three miles above the sea-level, and can only be traversed with llamas or mules. Over some of the yawning chasms, travellers and even beasts of burden have to be slung upon rope-bridges.

Like the Rocky Mountains, of which they may be said to be a continuation, the Andes are rich in mineral wealth.

The **Northern Highland** of Guiana is a rugged region traversed by the mountains that form the watershed between the basins of the Orinoco and the Amazon.

From this plateau rise the **Parime Mountains**, attaining an extreme height of 10,000 feet. The **Sierra Acaray** is a lower range, on the borders between Guiana and Brazil.

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The **Eastern Highland** of Brazil is a broad but low table-land, traversed by ridges of mountains not over 5,000 to 6,000 feet high.

These ridges seem to spring from a central point, Mt. Itacolumi, in the **Sierra Espinhazo** near the coast, and diverging, form the watersheds for the eastern rivers of Brazil.

The **Sierra Espinhazo** is celebrated for its diamond mines.

The **Great Central Plain** is the vast level lowland extending east from the Andes, and including the three immense basins of the Orinoco, Amazon and La Plata rivers.

The plains of the Orinoco are called **Llanos**, and are treeless. In the dry season they become parched, and all vegetation is destroyed; but as soon as the rains set in (May, June, July), the whole country becomes covered with luxuriant grass, which attracts multitudes of wild cattle and horses. Those of the Amazon are called **Selvas**, and are covered with an almost impenetrable growth of magnificent trees, climbing-plants, and dense underbrush. Beasts, birds, insects, and uncivilized native tribes, are the sole inhabitants. Those of La Plata, called **Pampas**, are covered with tall grass, and are interspersed with desert saline patches; they also support enormous numbers of wild cattle and horses.

All the important **Rivers** of South America belong to the Atlantic System.

There is a remarkable connection between the basins of the three great rivers. The upper Orinoco is connected by a navigable stream with the Rio Negro, the longest northern tributary of the Amazon. Between one of the branches of the

Madeira (also a tributary of the Amazon) and the Paraguay, the watershed is so low that the intervening tract is converted into a lake during the rainy season. There is then a continuous water-passage through the central plains from the mouth of the Orinoco to that of La Plata.

South America has few lakes. Lake **Maracaybo** is connected with the Caribbean Sea. Lake **Titicaca**, next in size, is the highest large lake in the world, and like Great Salt Lake in North America, has no outlet.

IV.—CLIMATE, VEGETATION, ANIMALS AND MINERALS.

The **Greater Part** of South America lies within the tropics, where its broad low plains have a hot and moist and therefore unhealthy climate.

This great moisture is caused partly by the tropical rains, (See page 15.) and by the Trade Winds which blow steadily from the east, but is greatly increased by the large amount of river surface and the immense area covered with dense vegetation.

The high and cool **Table-lands of the Andes** are noted for their healthful climate.

It is mainly for this reason that a large part of the civilized inhabitants of

South America have made their abode in this region, where large and numerous cities are to be found from one to two miles above the level of the sea.

The **Extreme Southern Part** of the continent, west of the Andes, is continually shrouded in clouds and drenched with rains.

These rains are caused by the return trade winds of the South Pacific, which lose their moisture on the western slope of the Andes.

The desert plains east of the Patagonian Andes are swept by violent, cold, dry winds from the icy summits of the mountains. Farther north these plains are warmer, but most of their streams dry up or end in salt lakes.

About one half of the **Western Coast** is a dry, rainless desert.

The trade winds from the east, in crossing the Andes south of the Equator, lose their moisture, and passing down to the Pacific, cause a rainless coast nearly 2,000 miles long. A large district of the high plateau of Bolivia is called the "Despoblado," or, the "Uninhabited," from the dryness and severity of its climate.

The richness and variety of **Tropical Vegetation** are indescribable. The dense forests of the plains and mountains abound in tree ferns, India rubber

and palm trees, and in rosewood, mahogany, and dye-woods. Other products, such as coffee, cocoa, indigo, tapioca, cotton and sugar, are limited only by the amount of labor and cultivation bestowed on them. The cinchona, yielding "Peruvian bark" from which quinine is prepared, is one of the most valuable trees.

The **Inhabitants** of South America comprise **Whites**, **Indians**, **Negroes** and **Mixed Races** created by the blending of the other races.

The **Whites** are principally descendants of the early Spanish and Portuguese colonists. They are the ruling class, but in most of the States have hardly kept pace with other civilized nations. The general language used is Spanish, and in Brazil, Portuguese. The **Indians** are descendants of the aboriginal tribes of South America. They are numerous, but are ignorant, indolent, and uncivilized. The **Negroes** form a large part of the population, especially in Brazil and Guiana. They are descendants of slaves imported from Africa. The **Mixed Races** form the largest part of the population.

Among the remarkable animals of South America are the **Llama**, a beast of burden, and the **Alpaca**; they resemble small camels. The **Condor** of the Andes is the largest known bird of prey. **Insects** are more numerous and brilliant than in any other continent. Horses, cattle and sheep were first introduced from Europe, and millions of these animals roam over the vast plains. They form the chief wealth of the inhabitants of these districts, and provide their principal occupations and exports.

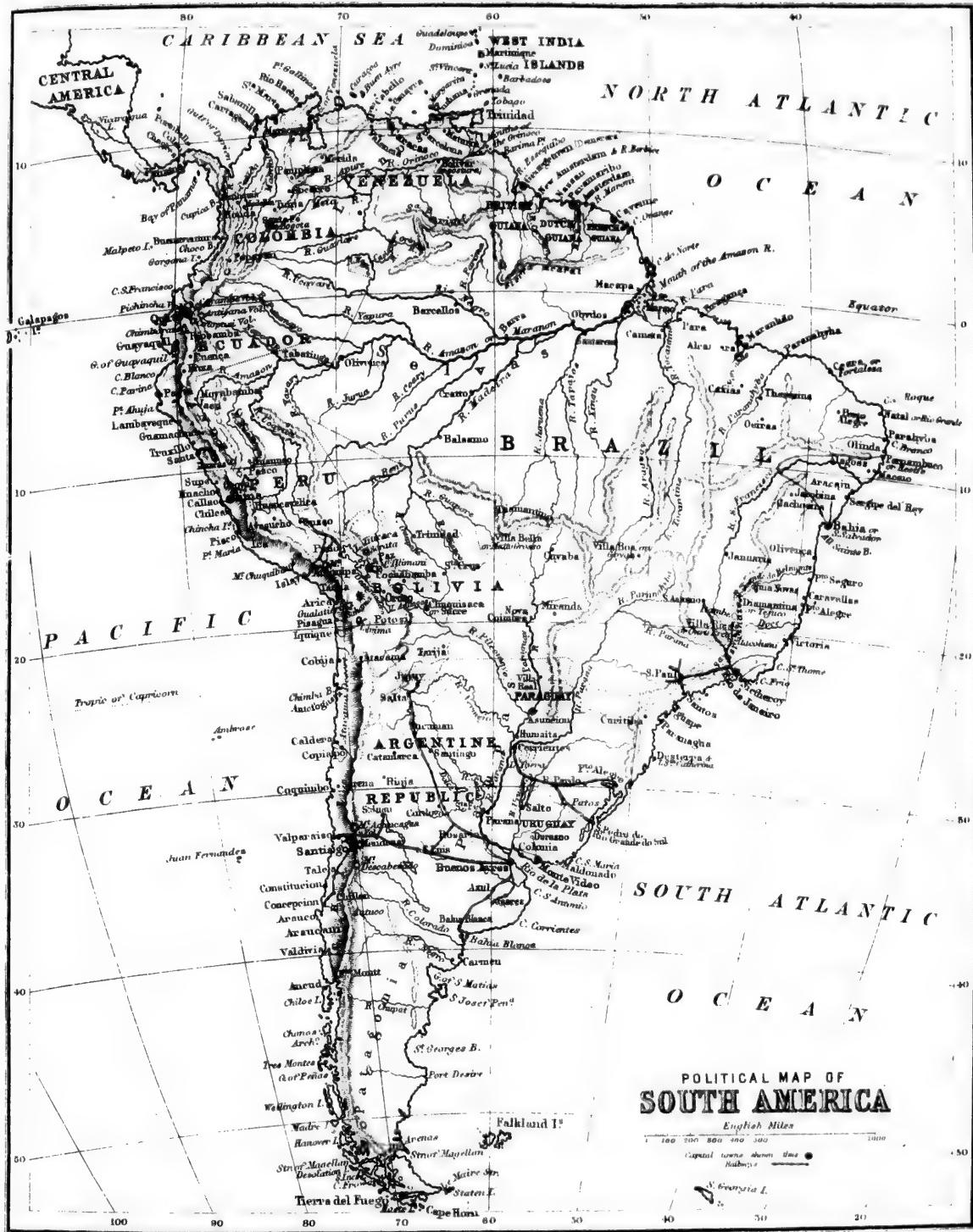
South America is rich in its mines of the precious metals and stones, as gold, silver, copper, and diamonds. The silver, copper and diamond mines are among the most extensive in the world.



TROPICAL VEGETATION.

POLITICAL SOUTH AMERICA.







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Andes?

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OCEAN OF MOUNTAIN-PEAKS IN THE ANDES.

Chili.—What countries border on Chili? What is remarkable in the position and shape of Chili? How is Chili separated from the other countries of South America? What is the peculiarity of the coast of the southern part of Chili? What small island is west in the Pacific Ocean? For what is it celebrated? (*For having been the solitary residence of Alexander Selkirk, whose story was afterwards written as that of Robinson Crusoe.*) What strait is in the south? What group of islands is south of it?

What cape forms the southernmost point of South America? What city is the capital of Chili? What city is its sea-port? What high mountain is near it on the north-east? What port is south of Valparaiso? What city east of Concepcion?

Argentine Republic.—What countries border on the Argentine Republic? What ocean washes its shores? What rivers form part of its boundary? What country is partly included in the Argentine Republic? (*Patagonia.*) To what other country does part belong? (*Chili.*) What large islands lie to the south-east? To whom do they belong? (*Britain.*) What island forms the extreme south-east point? What strait separates it from Tierra del Fuego? What city is the capital? What city is near the centre? What city north of Cordova? What city at the head of the Parana? Near the Andes, east of Valparaiso?

Uruguay.—What countries border on Uruguay? By what rivers is separated from them? What city is the capital?

Paraguay.—What countries border on Paraguay? What rivers form parts of its boundaries? What is the capital?

REVIEW EXERCISES.

Countries.—Where is it? How bounded? What is the chief town or city? Colombia? Venezuela? British Guiana? Dutch Guiana? French Guiana? Brazil? Ecuador? Peru? Bolivia? Chile? Argentine Republic? Uruguay? Paraguay?

Islands.—Where situated?

Trinidad? Joannes (or Marajo)? Galapagos? Chincha? Juan Fernandez? Tierra del Fuego? Falkland? Staten?

Capes.—From what coast does it project?

Point Gallinas? Saint Roque? Branco? Frio? Blanco? Horn?

Isthmus.—What countries does it connect?

Panama?

Mountains.—Where are they?

Andes? Parime? Acaray? Espinazo? Antisana (v)? Cotopaxi (v)? Cayambe (v)? Pichincha (v)? Sorata (or Illampu)? Illimani? Aconcagua?

Seas, Gulfs and Bays.—Where is it?

Caribbean Sea? Darien? Panama? Venezuela? All Saints? Guayaquil?

Straits.—Between what lands? What waters does it connect?

Magellan? Le Maire?

Rivers.—Where does it rise? In what direction does it flow? Into what body of water?

Magdalena? Orinoco? Amazon? Negro? Madeira? Para? Parana? San Francisco? Parana? Paraguay? La Plata? Uruguay? Pilcomayo?

Lakes.—Where situated? What outlet has it? Maracaybo? Titicaca?

Cities and Towns.—In what country is it? In what part? On or near what water?

Bogota? Cartagena? Popayan? Panama? Colon (*Aspinwall*)? Caracas? La Guayra? Valencia? Maracaybo? Bolivar (*Angostura*)? Puerto Cabello? Georgetown? Paramaribo? Cayenne? Rio de Janeiro? Pernambuco? Para (*Belem*)? Maranhao? Bahia? Quito? Guayaquil? Lima? Callao? Arequipa? Cuzco? Iquique? La Paz? Cochabamba? Chuquisaca (*Sucre*)? Potosi? Cobija? Santiago? Valparaiso? Concepcion? Chillan? Buenos Ayres? Cordova? Corrientes? Tucuman? Mendoza? Montevideo? Asuncion?

DIVISIONS OF SOUTH AMERICA.

The Political Divisions of South America are:—

UNITED STATES OF
COLOMBIA,
VENEZUELA,
GUIANA,
BRAZIL,
ECUADOR,

PERU,
BOLIVIA,
CHILI,
ARGENTINE REPUBLIC,
URUGUAY,
PARAGUAY,

These are all independent Republics, except Brazil and Guiana. The executive head of each is a President, and the law-making power is vested in a Legislature in most cases composed of two Houses. Brazil is a constitutional monarchy—the only monarchy in the Western Hemisphere—and Guiana is a European colony.

South America was discovered by Columbus in 1498 on his third voyage, when he landed at the mouth of the Orinoco River. Pizarro, a Spanish adventurer, in 1533 accomplished the conquest of the empire of Peru, then much more extensive than now, and inhabited by people who had attained a considerable degree of civilization. Brazil, discovered and first occupied by the Portuguese in 1549, fell successively under the dominion of Spain and Holland, but was finally recovered by Portugal in 1564. In the meanwhile, nearly the whole of the northern and western parts of South America had been overrun by the Spaniards, and ultimately the whole of South America, except Brazil, came under their rule. In 1810 the Spanish colonies of South America threw off the yoke of allegiance to the mother country, and mainly under the leadership of Bolivar, "the great Deliverer," became independent republics. Brazil became one of the kingdoms of Portugal, and in 1822 was proclaimed an independent empire.

In 1513 Balboa discovered the Pacific Ocean, till then unknown, by crossing the Isthmus of Panama; and in 1520 Magellan discovered the Strait which bears his name.

Almost all the **Civilized Inhabitants** are found in a broad band which surrounds the continent and crosses its narrow southern part from Buenos Ayres to Santiago. The large cities of the northern and western countries are in the high and cool table-lands; those of the eastern are sea-ports of the Atlantic.

The houses are generally built of sun-dried bricks, and owing to the prevalence of earthquakes are usually only one storey high. On the Orinoco the natives often build their houses on piles (see engraving, p. 53).

Education is generally neglected except in Chili and the Argentine Republic. The prevailing religion is the Roman Catholic.

The **Commerce** of South America has been comparatively limited, owing to the frequent civil wars and the enervation produced by the tropical climate. It is now rapidly increasing, especially in Brazil, Peru, Chili and the Argentine Republic.

Manufactures throughout the whole of South America are still in their infancy, and nearly all manufactured goods require to be imported, chiefly from Europe.

In all the republics of Spanish America, the Spanish Creoles are greatly outnumbered by the Indians and mixed races, who are either savages, or only half-civilized. This fact has an important influence upon the enterprise, commerce, social and political condition of these countries.

The roads are generally bad and the means of communication limited, there being but few lines of railway or telegraph; and the grandest system of navigable waters on the globe is as yet but little used.

Most of the railways are short, and extend from Rio de Janeiro, Lima, Santiago and Buenos Ayres.

UNITED STATES OF COLOMBIA.

The **United States of Colombia** comprise nine states with a president or governor at the head of each, but under one general government.

It is the most important of the northern republics, as it possesses the Isthmus of Panama, the most direct route for the rapidly increasing commerce between the countries bordering on the two great oceans.

A railway from Panama to Colon (*Aspinwall*) now crosses the isthmus, and is the most important railway in South America, being the shortest route from the Atlantic to the Pacific Oceans. A great ship-canal for the largest vessels is in course of construction between the same towns, and will make most important changes in the course of the commerce of the world. The cost of this enormous undertaking is estimated at about 120,000,000 of dollars.

The chief means of communication between the interior of Colombia and the sea is by the Magdalena River, which is navigated by steamers.

The **Products** of the lowlands are coffee, Peruvian bark, tobacco and cocoa. The mountains abound in valuable minerals—gold, silver, platinum, emeralds, salt and coal. The cattle of the plains supply jerked beef and hides.

The chief **Exports** are:—Peruvian bark, coffee, tobacco and hides.

Bogota, nearly 9,000 feet above the sea, is the capital and largest city; **Medellin** is the second largest city. **Popayan** is 6,000 feet above the sea. **Panama**, **Cartagena** and **Colon** are the chief seaports.

VENEZUELA.

Venezuela is a country rich in tropical products, the most valuable trees, and mineral wealth as yet undeveloped.

Vast herds of cattle find pasture on the llanos, and furnish hides and tallow for exportation. Coffee and cocoa are the chief objects of cultivation, and that only near the coast.

There are only about eighty miles of railway in the country, including the line from Caracas to La Guayra, ten miles, and scarcely any telegraph lines exist.

The chief **Exports** are coffee, cocoa, hides and gold.

Caracas is the capital. **La Guayra**, **Cumana**, **Puerto Cabello** and **Maracaybo** export coffee and tropical products. **Angostura** (Bolivar) on the Orinoco exports hides and tallow.

GUIANA.

Guiana is a fertile country, with a hot and moist but healthy climate. The cultivated parts are confined to the sea-coast and to a short distance from the rivers. It produces the finest sugar, and is rich in tropical products and valuable woods.

Guiana is remarkable for its phosphorescent insects and birds of brilliant plumage.

The majority of the **Inhabitants** are freed negroes.

The principal **Exports** are sugar, coffee, rice, indigo, Cayenne pepper and other spices.

Guiana is divided into three colonies belonging to Great Britain, Holland and France respectively.

Georgetown, the capital of British Guiana (*Demarara*), exports sugar, coffee and other tropical products. **Paramaribo**, the capital of Dutch Guiana (*Surinam*), is a place of considerable trade. **Cayenne**, the capital of French Guiana, on an island near the coast, is a penal settlement. It is very unhealthy.

EMPIRE OF BRAZIL.

Brazil stands first among the countries of South America in size and importance, and is nearly as large as the whole Dominion of Canada.

It has vast resources, at present but very little developed: a fertile soil that yields coffee, sugar-cane, tobacco, rice and maize in great abundance: forests of valuable timber, dye-woods and caoutchouc trees; immense pastures, covered with cattle and horses; rivers that are navigable far into the heart of the country; and stores of mineral wealth—diamonds, gold, iron, copper and coal.



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A coffee-plantation is here represented. The bushes are partially protected from the tropical sun by palms and other trees. There are two, and sometimes three, coffee-harvests in a year. The berries, gathered by hand, or shaken from the bushes on sheets spread beneath, are gradually dried, and the seeds are then separated from the shells.

The **Population** is chiefly on or near the south-eastern coast, where the climate is the most pleasant and healthy. The people are of three races—whites, Indians and negroes, a large majority belonging to mixed races.

In 1871 there were nearly 1,500,000 slaves in Brazil; but by law, every child born of slave parents since that date is free. Most of the negroes of South America are in Brazil and Guiana.

Agriculture is the chief pursuit, and coffee is the staple product. Brazil furnishes the greater part of the coffee used in the world.

Wheat is not cultivated, and all the flour used is imported from Canada or the United States. The great dependence of the people is on manioc-flour, the making of which is one of the leading industries. The banana, pine-apple, mango and other fruits abound.

The manioc is a shrub with large roots. These are scraped to a pulp, which is prepared for use by being pressed, baked on a hot iron plate, and dried in the sun. When well washed with cold water and dried, it becomes the tapioca of commerce.

The **Forest-products** of Brazil are rosewood, mahogany and tortoise-shell wood (the most beautiful cabinet wood in the world), log-wood and other dyewoods; Brazil-nuts, cocoa-nuts, wax from a variety of the palm, and caoutchouc from which India-rubber is derived. The latter is obtained in the same manner as maple-sap in Ontario, by making incisions in the trees, and the milky juice which oozes out is hardened in the sun or over a fire.

The **Exports** are:—Coffee, sugar, tobacco, cotton, caoutchouc, mahogany, rosewood, Brazil-wood, dyewoods, hides and tallow; also gold, silver, diamonds and other precious stones.

About 2,000 miles of **Railway** are now opened in Brazil. One ocean telegraph cable connects Brazil with Portugal, and another with the West Indies.

Rio de Janeiro, the capital, sometimes called Rio, is the most important port and the largest city in the Southern Hemisphere. It is the great mart for coffee. Other important ports are **Bahia**, the centre of the tobacco trade, and the second city

in Brazil, **Pernambuco**, the centre of the sugar region, and **Maranhao**. **Para**, at the mouth of the great river system, is the shipping point for caoutchouc, cocoa, rice and cocoa-nuts.

ECUADOR.

Ecuador is noted for its numerous volcanoes, but is of little commercial importance.

The chief **Exports** are cocoa, vegetable ivory, Peruvian bark and caoutchouc.

Roads are almost unknown, and only one short line of railway exists. **Quito**, the "City of the Clouds," 9,543 feet above the sea, is the capital, and **Guayaquil** the chief port.

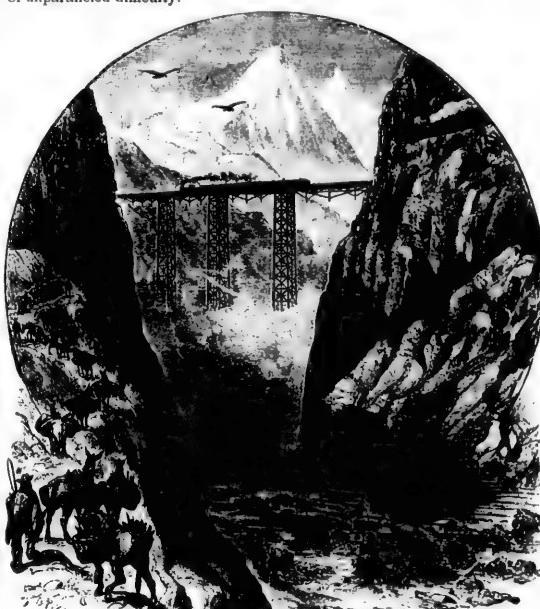
The **Galapagos Islands** belong to Ecuador.

PERU.

Peru has hitherto been chiefly noted for its fertilizers—guano and nitrate of soda—which have been exported in immense quantities, chiefly to Great Britain and other European countries; and for its famous silver and quicksilver mines.

More attention has latterly been given to agriculture and to the development of the country.

Railways have been built, and Peru has now 2,000 miles in operation. One line when completed will connect the coast with steamers on the Amazon, and afford direct communication across the continent. This great railway running east from Callao, the principal Peruvian port, crosses the summit of the Andes through a tunnel, at an elevation of nearly three miles above the sea-level. It passes over a deep mountain gorge, on the highest bridge in the world, as shown on the engraving. The construction of the road was a work of unparalleled difficulty.



TRAVELLING IN THE ANDES—PACK-MULE TRAIN AND RAILWAY

The **Exports** are.—Guano, nitrate of soda, sugar, cotton, rice, wool of the alpaca and llama, and chinchilla-fur. Silver and quicksilver are also exported.

Manufactures are still of small importance, and **Education** is neglected, although Lima contains the oldest University in America. Valuable minerals abound, but little mining is done except in silver and quicksilver.

Guano is obtained from the Chincha Islands, and other islands along the coast; and nitrate of soda from the southern part of the rainless coast.

Lima, the capital, is the largest city, and carries on an extensive trade through its seaport, **Callao**, seven miles distant. **Arequipa** and **Cuzco** are large cities, the latter celebrated as the site of the Temple of the Sun, the most splendid structure of the new world, when Peru was conquered by Pizarro. **Pasco**, 13,000 feet above the sea, is surrounded by silver mines.

Lake **Titicaca**, on the borders of Bolivia, and surrounded by a mass of snow-clad volcanoes, is the highest large mountain lake in the world.

BOLIVIA.

Bolivia, named after Bolivar, "the great Deliverer," has but little commerce, as the productive districts are difficult of access, being separated from the coast by a desert.

A railway, now begun, round the rapids of the Madeira, will provide the country with an outlet by way of the Amazon, and thus develop its resources.

The **Silver Mines** of Potosi have been among the most profitable in the world, and silver forms the chief article of export.

Other **Exports** are saltpetre, Peruvian bark, coffee and cocoa.

Sucre (*Soo'-cray*), or Chuquisaco, the capital, **Potosi**, **Cochabamba**, and **La Paz**, the largest city, are all on the Bolivian Plateau, and are from 9,000 to 13,000 feet above the sea.

CHILI.

Chili is the most enterprising of the South American countries, and has a large proportion of European inhabitants.

Forming a narrow strip about 100 miles wide between the Andes and the Pacific Ocean, it has a **Coast-Line** of over 2,000 miles. **Minerals** are abundant, especially copper, saltpetre and silver, which are largely exported—the mountains contain precious stones. **Agriculture** is extensively carried on, and great quantities of wheat, as well as hides, tallow and wool, are exported. The trade is chiefly with Great Britain.

About 1,000 miles of railway are in operation.

Education is supported by government, and a flourishing University is established in Santiago.

Santiago, the capital, is the largest city. **Valparaiso**, the second city, is the largest sea-port on the Pacific coast of South America. **Chillan** and **Concepcion** are important towns. **Coquio** is the centre of the mining district.

South of Concepcion, the country, although nominally belonging to Chili, is occupied by a confederation of independent Indian tribes, called **Araucanians**. They have an organized government, and a comparatively high degree of civilization.

Patagonia and **Tierra del Fuego** form the southern part of South America. The western portion of this extensive region belongs to Chili, the eastern to the Argentine Republic. The native inhabitants are savage tribes of Indians. Those of Tierra del Fuego are the most wretched and degraded of the natives of America.

To avoid the region of continual storms round Tierra del Fuego and Cape Horn, steamers usually pass through the Strait of Magellan.

Punta Arenas, or "Sandy Point," on the Strait of Magellan, is a port of call for ships.

ARGENTINE REPUBLIC.

The **Argentine Republic** ranks next to Chili in enterprise. It receives by far the largest immigration from Europe, and commerce is increasing.

Twelve lines of steamers connect it with Europe. About 2,000 miles of railway are in operation; and the lines in course of construction will connect Buenos Ayres with Chili and Bolivia.

Education is fostered by the Government, and is advancing more rapidly than in any other country of South America.

The **Great Industry** of the country is the raising of cattle and sheep, and in proportion to its size, the Argentine Republic contains more of these than any other country in the world.

Manufactures are unimportant, and the principal trade is carried on with Great Britain and other European nations.

The chief **Exports** are wool, hides, tallow, sheepskins, live cattle and dried beef.

Buenos Ayres, the capital, is the second city in size in South America. Other important cities, **Rosario**, **Mendoza**, **Cordova**, **Tucuman** and **Corrientes** are on the great trade routes to Chili, Bolivia and Paraguay.

The **Pampas** are inhabited by the half-breeds called Gauchos (*gaucho*), who employ themselves in catching wild horses, and in lassoing and slaughtering cattle.

Violent south-west winds called **Pamperos** sweep over the pampas in the dry season, carrying with them great clouds of dust.

URUGUAY.

Uruguay resembles the Argentine Republic in its extensive pasture lands and great herds of horses and cattle.

Its **Exports** are also the same, and the greater part of the trade is with Europe.

Montevideo, the capital, has a large trade in cattle products, and is the centre of commerce.

PARAGUAY.

Paraguay, the smallest and weakest of the South American republics, is the only one which has no sea-coast. It lies in the region of transition between the selvas and the treeless plains.

It has suffered much from war and from unwise government. The **Exports** are unimportant, consisting of *maté* or Paraguay tea (the leaves of a shrub, a species of holly), tobacco and oranges.

Asuncion is the capital and largest town.

FALKLAND ISLANDS.

The **Falkland Islands**, situated about 300 miles east of the Strait of Magellan, consist of a group of about 100 small islands, some of which are mountainous (Mt. Adam, rising 2,315 feet above the sea). The British Government took possession of them in 1833 for the protection of the whale fishery. The **Exports** consist of oil, hides, tallow, sealskins and wool.

South Georgia, about 800 miles to the south-east, belongs to the Falkland Island Colony, but is uninhabited.

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CITY OF
Towns

Buenos Ayres
Rio de Janeiro
Santiago
Bahia
Pernambuco
Lima
Valparaiso
Montevideo
Caracas
Georgetown
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SOUTH AMERICA—STATISTICAL REFERENCE TABLE

COUNTRY.	AREA IN Sq. Miles.	POPULATION.	PRINCIPAL EXPORTS.	POPULATION.		PRINCIPAL EXPORTS.
				PER CENT. INcrease OR DE- CREASE	CAPITAL.	
U. S. of Colombia.....	317,327	3,000,000	9½	Bogota	40,883	Peruvian bark, coffee, tobacco, hides, gold and silver
Venezuela.....	425,401	2,075,445	4½	Caracas	55,048	Coffee, cacao, cotton, hides and gold
Guiana—						
British	76,000	24,8110	3	Georgetown	47,175	Sugar and coffee.
Dutch	45,580	6,476	1½	Paramaribo	22,000	do do
French	46,380	27,084	2½	Cayenne	10,000	Cayenne pepper and spices
Brazil.....	3,184,817	10,105,201	3	Rio de Janeiro	274,072	Coffee, sugar, caoutchouc, cotton, tobacco, hides, woods.
Ecuador.....	235,739	9,40,033	4	Quito	23,000	Cocoa, Peruvian bark, vegetable ivory
Peru.....	427,817	3,050,000	7	Lima	101,488	Guano, nitrate of soda, silver, sugar, cotton, alpaca wool and furs.
Bolivia.....	405,551	2,325,000	4½	Sucre	12,000	Silver, Peruvian bark, coffee and cacao
Chili.....	295,295	2,183,434	10½	Santiago	150,397	Copper, silver, saltpetre, wheat and flour
Argentine Republic.....	1,083,339	2,510,000	2½	Buenos Ayres	280,025	Wool, hides, tallow, dried beef, cattle and cattle products.
Uruguay.....	71,493	438,245	6	Montevideo	73,353	Cattle, dried beef, hides and wool.
Paraguay.....	91,026	293,844	3	Asuncion	19,403	Paraguay tea, tobacco and oranges
Falkland Islands.....	6,500	1,553	...	.....	.....	Oil, tallow, hides, sealskins and wool.

CHIEF CITIES AND TOWNS OF SOUTH AMERICA—REFERENCE TABLE

CITY OR TOWN.	COUNTRY.	POPU- LATION.	NOTABLE FEATURES.	CITY OR TOWN.	COUNTRY.	POPU- LATION.	NOTABLE FEATURES.
Buenos Ayres.....	Argentine Rep.	289,925	Capital.—Cattle trade.	Maracaybo	Venezuela.....	22,224	Important sea-port.
Rio de Janeiro.....	Brazil.....	274,972	Capital.—Centre of coffee trade.	Paramaribo	Dutch Guiana	22,000	Capital
Santiago	Chili	150,367	Capital.	Guayaquil	Ecuador	20,000	Principal sea-port.
Bahia.....	Brazil	128,920	Centre of tobacco trade of Brazil.	Medellin	Colombia	20,000	Second largest city.
Pernambuco	do	116,671	Centre of sugar trade of Brazil.	Asuncion	Paraguay	19,403	Capital.—Exports <i>maté</i> tea
Lima.....	Peru	101,488	Capital—seat of the oldest University in America.	Chillan	Chili	19,044	Centre of the agricultural district
Valparaiso	Chili	97,737	Sea-port for Santiago.—Leading port of the Pacific coast.	Panama	Colombia	18,378	(Terminus of Panama Railway
Montevideo	Uruguay	73,353	Capital.—Cattle trade.	Colon	Peru	18,370	and Canal,
Caracas	Venezuela	55,638	Capital.—Earthquake, in 1812, killed 12,000 people.	Cuoco	Chili	18,277	Ancient capital.
Georgetown	British Guiana	47,175	Capital.	Concepcion	Chili	17,438	Sea-port connected by rail with Chillan and Santiago
Bogota	Colombia	40,883	Capital.—9,000 feet above sea-level.	Tucuman	Argentine Rep.	17,438	On overland route to Bolivia.
Valencia	Venezuela	36,145	Second largest city.	Cochabamba	Bolivia	14,705	An important town in the interior.
Para	Brazil	35,000	Exports of caoutchouc, cocoa and cocoanuts.	Cumana	Venezuela	12,507	Principal shipping port.
Callao	Peru	33,502	Sea-port for Lima.—Exports guano.	Sucre	Bolivia	12,000	Capital.—Also called Chuquisaca.
Maranhao	Brazil	31,604	Important sea-port.	Copiapo	Chili	11,432	Centre of copper-mines.
Arequipa	Peru	29,237	Connected by rail and by steamer on L. Titicaca with Bolivia.	Corrientes	Argentine Rep.	11,218	On route to Paraguay.
Cordova	Argentine Rep.	28,523	On overland route to Chili.	Potosi	Bolivia	11,000	Celebrated silver mines.
La Paz	Bolivia	26,000	Largest city.	Angostura	Venezuela	10,861	Centre of trade on the Orinoco.
Quito	Ecuador	23,000	Capital.—9,543 feet above sea-level.	Puerto Cabello	do	10,145	Port of Valencia.

GENERAL QUESTIONS.

Commercial.—Which is the most populous country in South America? Which two rank next? What four countries exceed Ontario slightly in population? Which of the republics has the smallest population? Which country contains the largest city? What are its exports? How is it situated? Which country contains the next largest city? What are its exports? How is it situated? Which country has no sea-port? What countries export cocoa? Coffee? Sugar? Cotton? Hides? Cattle? Tobacco? Cinchona (*Peruvian bark*)? Guano? Copper? Wool? Wheat? Caoutchouc? Silver? Diamonds? Vegetable Ivory? Timber? Furs? What are the principal ports for shipping coffee? Copper? Guano? Cocoa? Caoutchouc? Sugar? Tobacco? Hides and tallow? Cattle? Which is the only monarchy in South America? What three European countries have colonies in South America? What are they? What nine countries of South America are republics? In what parts of the continent are most of the civilized inhabitants?

Voyages.—If a vessel sails from Montreal to Rio de Janeiro, what cargo would she carry? What cargo would she bring back? Past what countries would she sail? If a vessel sails from Maranhao to Panama what countries would she pass? Through what waters? What cargo would a vessel from London, England, bring to Montevideo? To Callao? To Valparaiso? (*Coal and manufactures*.) What cargo would she carry back from Montevideo? From Callao? From Valparaiso? What cargo would be sent from Halifax to Rio de Janeiro? (*Fish*.) What cargo would be shipped from Georgetown (*Demarara*) to Montreal? What cargo would be shipped from St. John, N.B., to Montevideo? (*Lumber*.) What cargo would be carried back to the West Indies? (*Dried meat*.) From the West Indies to Halifax?

Rail and Telegraph.—How can a person telegraph to another,—from Rio de Janeiro to New York? To Montreal? To Lisbon? To London? Between what towns is the Panama Railway? What railways are in Peru? In Chili? In the Argentine Republic?



ANIMALS OF EUROPE.

In the circle at the head of the column are shown wolves in pursuit of a wild-boar: the former inhabit the forest-regions of Europe; boars are most numerous in Germany, Hungary, Italy, and Greece. On the right is the reindeer; and above him the cunning wolverine, or glutton, which is wont to spring upon its prey.

Herds of reindeer constitute the Laplander's wealth, their milk and flesh supplying him with food, their skins with clothing; they feed mainly on lichens, for which they root under the snow. Near the reindeer are two lemmings; these little animals at times move through Northern Europe in countless thousands, destroying whatever lies in their path. Birds of prey, in great flocks, accompany them.

On the left, we have the spotted lynx with his favorite hare, and the ermine prized for its white fur. Below the circle is represented the brown bear, common in all the mountainous regions. The animal with the pointed muzzle, looking round at Bruin, is the fox, which, as well as the badger shown near it, is widely distributed.

In the Alpine scene below, the lammergeyer (*lammergeier*) is driving the frightened chamois over the precipice, that he may feed on its carcass. The wary chamois (whose skin is made into soft "shammy"), and the ibex, in the foreground, inhabit the summits of the Alps, the Pyrenees, and the Caucasus Mountains.

On the right of the circle at the bottom, we have the sweet-voiced nightingale, which winters in northern Africa, but is found during the summer in all parts of Europe except the far north. Above it is the blackbird, and on the branch beside it the pugnacious shrike, sometimes trained in Russia to catch rats and mice. The skylark is on the ground, and the Robin red-breast on an adjacent twig.

The great bustard, standing on one foot in the picture, inhabits dry, grassy plains. In the background is the long-legged crane; in the foreground, the pelican with its large bill. The other birds are different species of grouse. On the ground is the ptarmigan; above it, the black-cock; and perched on a branch, the capercailzie.



PHYSICAL EUROPE.

I.—GENERAL DESCRIPTION.

Europe occupies the north-western part of the Eastern Continent, and may be considered as a great peninsula, projecting westward from Asia, the main continental body, between the Arctic Ocean and the Mediterranean Sea.

It is the smallest of the six Grand Divisions, but is second in population, being the most densely populated in comparison to its size. The area comprises about 3,780,000 square miles, or a little greater than the Dominion of Canada, but the population numbers about 329,500,000.

The **Coast-line** of Europe is about 20,000 miles in length, which, in proportion to the area, is much greater than that of any of the other grand divisions.

The **Rivers** of Europe are most valuable for commerce, and the **Lakes**, though small, are unsurpassed for their pictorial beauty, and form a favorite resort for the traveller and tourist.

The **Natural Advantages** possessed by Europe are:—its central position, and the excellent harbors afforded by the islands and by the numerous indentations of the coast; the fertility of the soil; the variety of climate; the warm Gulf Stream and moist winds of the Atlantic on the west; and its valuable mines of metals and minerals, more especially of coal and iron. In addition to these, Europe is the centre of civilization in religion, arts, science, political influence, wealth and manufactures,



UROPE.

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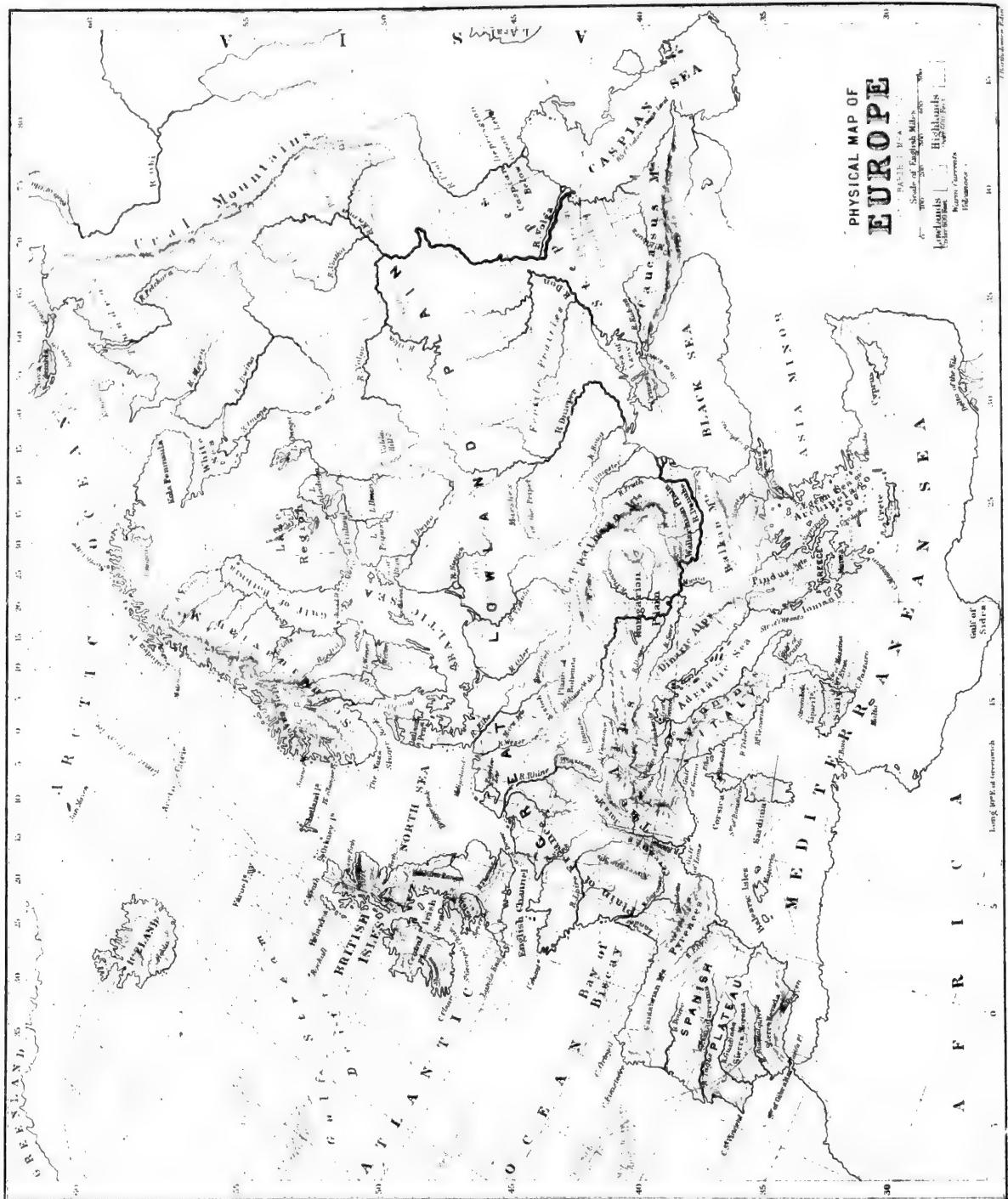
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PHYSICAL MAP OF EUROPE



II. QUESTIONS ON THE MAP.

Outlines.—From what other continent does Europe project? In what direction? What sea is it separated from? By what sea is it south of Europe? What sea is the Scandinavian Peninsula? What sea is the Spanish Peninsula? What sea connects that sea with the Adriatic Sea? What small plain does it drain? What large river flows east through the Southern Highlands? What sea is the Bay of Biscay? What river flows into the Gulf of Lions? What river flows into the Black Sea? What river flows into the Caspian Sea? What river flows into the Baltic Sea? What river flows into the North Sea? What river flows into the Mediterranean Sea? What river flows into the Aegean Sea? What river flows into the Ionian Sea? What river flows into the Adriatic Sea? What river flows into the Po?

is the general direction of these rivers? What is the general direction of the rivers of the Scandinavian Peninsula? What rivers flow into the Bay of Biscay? What rivers in the Spanish Peninsula? What river flows into the Gulf of Lions? Into the Adriatic Sea? What small plain does it drain? What large river flows east through the Southern Highlands? What sea is the Bay of Biscay? What river flows into the Gulf of Lions? What large river flows into the Black Sea? What river flows into the Caspian Sea? What river flows into the Baltic Sea? What river flows into the North Sea? What river flows into the Mediterranean Sea? What river flows into the Aegean Sea? What river flows into the Ionian Sea? What river flows into the Adriatic Sea? What river flows into the Po?



II. QUESTIONS ON THE MAP.

Outline.—From what other continent does Europe project? In what direction? What continent is south of Europe? By what sea is it separated? What gulf are in the northern part of the Mediterranean Sea? What strait connects the Adriatic Sea with the Mediterranean? What gulf is to the west of it? What two straits and what sea connect the Aegean with the Black Sea? What ocean is north of Europe? What sea is an arm of this ocean? What ocean is west of Europe? What sea east of the British Isles? What sea separates the British Isles. What channel connects this sea with the Atlantic Ocean? What channel and strait separate the British Isles from Lowland Europe? What sea and gulls project into the Lowland Plain? What channels connect the Baltic with the North Sea? What bay is west of the

Plain of France? What seas are south-east of the Lowland Plain? What is the peculiarity of the Caspian Sea? What river flows into the English Channel? What great peninsula forms the north-western part of Europe? (*the Scandinavian Peninsula*) What smaller peninsula is south of it? What three peninsulas project from the Southern Highland of Europe? (*Spain, Italy, Greece*) What is the peninsula of Spain sometimes called? (*the Iberian Peninsula*) What smaller peninsula is south of Greece? What peninsula is between the Sea of Azov and the Black Sea? What is the most northern cape? What islands are south-west of it? Name all the capes from Cape North to Cape St. Vincent. From Cape St. Vincent to Cape Matapan. Name the straits in the Mediterranean Sea and their position. Name the principal islands and groups of islands in the Mediterranean Sea: What island is south of Sicily? Where is the Archipelago situated? What island is south of it? What islands are west of the Morea? What large island, ranked as Danish America, is shown on this map? What large islands are west of the mainland of Europe? What small groups of islands are north of the British Isles? Contrast the outline of Europe with that of North or South America.

HIGHLANDS.—In what part of Europe are the Great Highlands? What mountains form the Great Lowland? What mountains are north-west of it? What mountains form the southern peninsulas? The northern chain of the Southern Highlands? Which project into the southern peninsulas? What mountains bound the Great Lowland? What hills are near the centre? What volcano is in Italy? North of Sicily? Part of the Southern Highlands? What mountains form the centre of the Southern Highlands? The south-east? What hills are on the north-east? On the north-west? On the north-east? On the south-east? What mountains form the greater part of Low Europe? What position does it occupy? What plain forms the south-western part? What part of the Great Plain is cold and barren? What part is covered with forests? Where are the fertile prairie regions? The salt steppes? The lake region? What two lakes are connected with the Gulf of Finland? What rivers flow into the Antarctic Ocean? Into the White Sea? What river flows into the Gulf of Riga? What rivers into the Baltic Sea? Into the North Sea? What is the general direction of these rivers? What is the general direction of the rivers of the Scandinavian Peninsula? What rivers flow into the Bay of Biscay? What rivers in the Spanish Peninsula? What river flows into the Gulf of Lions? Into the Adriatic Sea? What small plain does it drain? What large river flows east through the Southern Highlands? What plains does it drain? Where does it flow? Name some of its tributaries. What rivers flow into the Black Sea? What river into the Sea of Azov? What rivers into the Caspian Sea? Which of these forms a partial boundary between Europe and Asia?

Ocean Currents.—What great ocean current washes the shores of western Europe? Describe its course. What current between Iceland and the Scandinavian Peninsula?

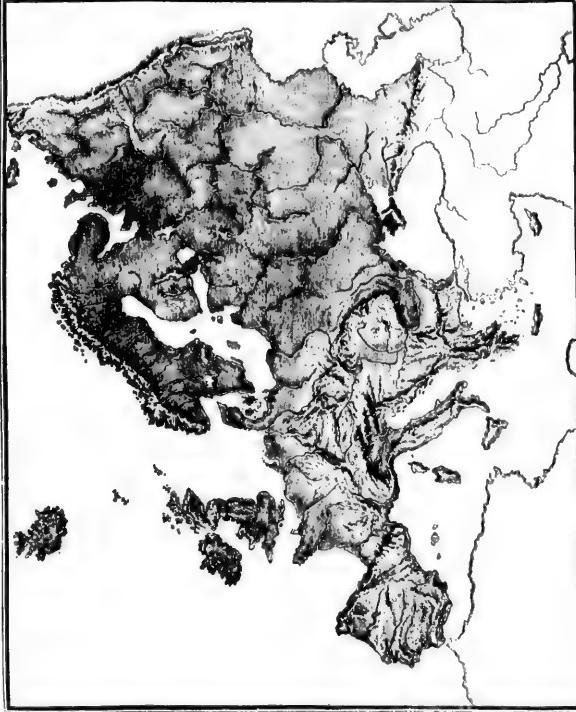
Geographical Circles.—What geographical circle crosses Europe? In what zone is the greater part of this grand division? Through how many degrees of latitude does Europe extend? Which is the prime meridian? Through how many degrees of longitude does Europe extend west of the prime meridian? East?

Climate and Products.—What do the red lines show? What influence has the Gulf Stream upon the direction of these lines? What are the principal vegetable products of Europe? Of the south-eastern part of the Great Lowland Plain? Of the western part? Of the central part? Of the northern part? Of the Hungarian Plain? What fishery is carried on in the Arctic region? On the shores of the North Sea and British Channel? On the shores of Scandinavia? In the Mediterranean Sea? In the Caspian Sea and Volga River? What minerals and metals are found in the British Islands? In the Scandinavian Peninsula? In the Ural Mountains? Near the Carpathian Mountains? East of the Rhine?

III. — SURFACE AND DRAINAGE.
Europe may be naturally divided into two principal parts: the **Great Lowland Plain**, and the **Southern Highlands**.

The **Great Lowland Plain** occupies the whole of the eastern part of Europe, and continuing westward, skirting the Baltic and North Seas, includes the **Plain of France** extending to the Bay of Biscay.

The **Great Lowland Plain** extends from the Arctic Ocean to the Black and Caspian Seas, and is bordered by ranges of mountains: the Scandinavian Mountains on the north-west; the Ural Mountains on the north-east; the Caucasus Mountains and the Southern Highland on the south. There is only a slight rise towards the centre which forms the watershed for the largest rivers of Europe. The low **Valdai Hills** form the greatest height of land, and these do not rise more than 1,100 feet above the level of the sea. The **Plain of France** lies west of the Rhine, and extends eastward to the Eastern Plain. Its general slope is from the Southern Highland northward to the sea. It is continued in the adjacent portions of the British Islands.



PHYSICAL VIEW OF EUROPE.

The **Southern Highlands** comprise two series of mountain ranges diverging from the great central range, the **Alps**. These are partially separated from each other by the valleys of the Rhine, the Rhone, the Po, and the Danube, and may be termed the *Central* and *Southern Highlands*.

The **Central Highland** comprises the main chain of the **Alps**, with the **Cevennes**, **Jura**, and **Vosges** (*walsh*) Mountains on the west, and the **Carpathians** on the east, connected with the Alps by the lower ranges of the **Black Forest** (*Schwarze Wald*) and the **Bohemian Mountains** (*Böhmer-wald*, Erz and *Riesen-gebirge*) curving round the upper Danube.

The **Southern Highland** extends from the **Cantabrian** and **Pyrenees Mountains** on the west, to the **Balkan** and **Caucasus Mountains** on the east. Offshoots from this

sides at the rate of about two feet a day. These gradually dissolve as they reach the limit of the snow-line and form the sources of numerous mountain-streams. The Alps are a favorite resort of summer tourists, and are crossed by carriage roads and railways, through several passes and long tunnels.

In the Caucasus Mountains is Mount Elburz, the highest summit in Europe (18,526 feet).

The **Scandinavian Peninsula** comprises a series of mountain ranges rising from a long, narrow plateau more abrupt on the west than on the east.

It extends about 1,200 miles in length, and on the west is indented by numerous narrow arms of the sea, called **Fjords**, which stretch a considerable distance inland between high, precipitous, rocky banks.

The **Rivers** of the eastern part of the Great Lowland Plain are the largest in Europe, though most of them are commercially of less importance than those of western Europe.

The largest are:—the **Volga**, which forms the chief natural channel of commerce in the east, and the **Dwina** in the north. A canal connecting branches of these rivers completes the system of navigation between the Caspian and White Seas. The **Dnieper** and the **Don** have extensive fertile basins, and are important commercially.

In the north-western part of the Eastern Plain is the Lake



Region,
including
Lakes Ladooga and Onega,
the largest in Europe.

system traverse the three southern peninsulas, of which the **Appennines** in Italy, and the **Pindus Mountains** in Turkey, are the most noted.

Mount Blanc, the loftiest peak of the Alps, has an elevation of nearly three miles (15,787 feet). The highest summits of the Alps are covered with perpetual snow, and in the intervening valleys are numerous great glaciers, looking like enormous frozen torrents, and moving slowly down the mountain

The Central Highlands contain the sources of the most important commercial rivers of Europe:—the **Danube**, the **Rhine**, the **Rhone**, the **Po**, and other large rivers, with numerous commercial and manufacturing cities on their banks.

The **Danube** (1,800 miles long), the second in size of the European rivers, is the channel of internal trade of Southern Germany, Austria, and Turkey. The **Rhine** (880 miles long), is navigable for steamers to Basle, and is celebrated for its picturesque scenery, and for the many large cities on its banks. The **Rhone** drains south-eastern France, and is important commercially. The **Po**, the largest river of Italy, waters the fertile plains of Lombardy.



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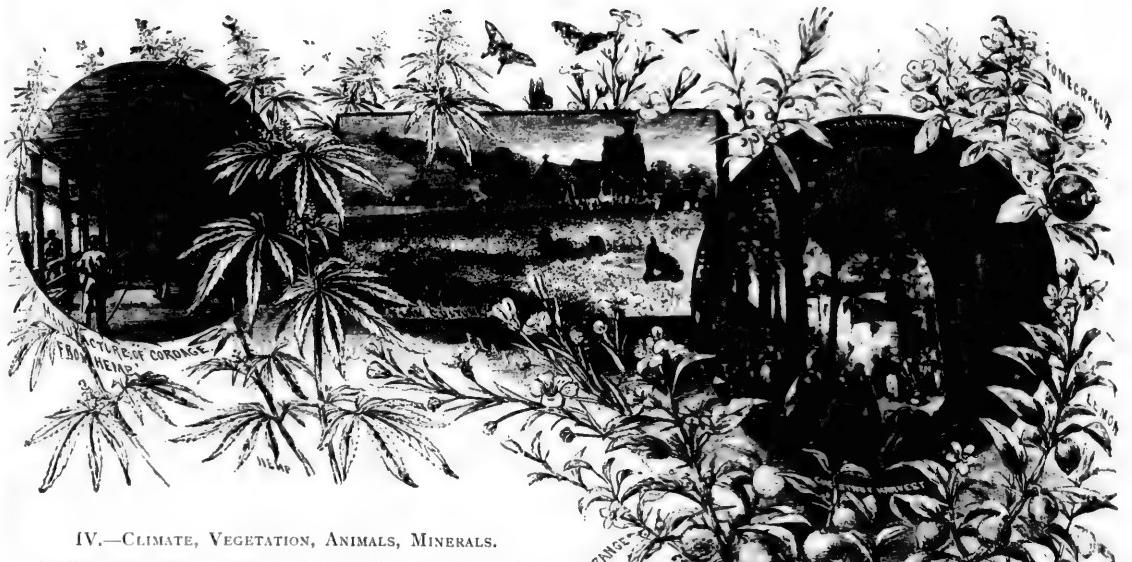
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IV.—CLIMATE, VEGETATION, ANIMALS, MINERALS.

Western Europe, especially near the Atlantic Ocean, has a milder climate than is found in North America or other parts of the world in the same latitude.

The mildness of the climate is owing chiefly to the influence of the Gulf Stream which washes the western coast, and to the warm south-west or Return Trade Winds, which bring with them a part of the heat they have acquired in the Torrid Zone (see p. 15). Thus, Ireland, "the ever-green isle," with its mild climate, is in the same latitude as cold and barren Labrador.

Grains, fruits, and vines are extensively cultivated in the western lowland plain and in the valleys of the highlands. The beet-root is also largely grown for making sugar. The cod, herring, salmon and oyster fisheries on the coast are valuable.

Central Europe shows some remarkable peculiarities in climate. In winter it is coldest in the south, and becomes colder also with the increasing distance eastward from the ocean.

The variation of temperature is caused by the great elevation of the southern part, so that some cities in Highland Europe have much colder winters than others far north of them near the shores of the ocean. The power of the Gulf Stream and of the warm south-west winds also becomes gradually less as the distance from the Atlantic Ocean increases, so that while the Rhine is frozen over on the average for twenty-six days during the year, the Elbe is frozen for sixty-two and the Vistula for about eighty.

Central Europe is rich in minerals—coal, iron, salt and others. It also produces grain, hemp, flax and cattle in abundance.

Southern Europe has an almost tropical climate.

This is the effect of the general southern slope of the country, the warm winds from Africa, the mild waters of the Mediterranean, and the high mountain ranges which form a barrier to the cold polar winds.

Figs, oranges, the mulberry, almonds, rice and olives grow in the same latitude as the south-western part of Ontario, and the vine is generally cultivated.

The **Spanish Plateau**, owing to its elevation, has a cold winter and a hot, dry summer.

The chestnut and cork-oak trees grow abundantly, and the vineyards are famous.

The **Great Eastern Plain** has a varied climate; the winters are intensely cold, but in the south the summers are hot.

The winter climate is caused by the distance from the warm western coast, and by the prevalence of the polar winds, which sweep unchecked from the Arctic Ocean to the Black and Caspian Seas.

The northern regions are mossy, treeless swamps called *Tundras*, with but few human inhabitants and only reindeer and other arctic animals.





Another wide treeless region stretches across the southern part of the plain. Barren, salt plains, called *Steppes*, occupy the eastern portion, but in the west are broad prairie-lands, which sustain large numbers of sheep, horses and cattle, and produce maize and large quantities of wheat.

The Centre is occupied by a vast forest, where animals of the north take refuge during the long winter. In the colder regions the hardy grains—rye, oats, and barley—are cultivated; further south—flax, hemp, and wheat.

Extensive and valuable **Fisheries** are carried on, the principal being the cod, herring, salmon and oyster, along the north-western coasts, and the sardine, tunny and anchovy in the Mediterranean. Europe possesses the precious **Metals**—gold, silver and platinum—besides an abundance of the most useful **Minerals**, such as coal, iron, lead, tin, zinc, and copper.

POLITICAL EUROPE.

QUESTIONS ON THE MAP.

Countries.—What country forms the eastern part of Europe? What countries are north-west of Russia? What countries are washed by the Mediterranean Sea? By the Black Sea? By the Adriatic? What countries are bordered by the Atlantic Ocean? By the North Sea? By the Baltic? By the Arctic Ocean? What two countries have no sea-coast? Name the countries of Europe.

Norway and **Sweden**.—What mountains extend between Norway and Sweden? What mountains are in the south of Norway? What country is north-east of Sweden and Norway? What gulf is between Sweden and Russia? What islands are in the Baltic Sea? What town is on the shore of the Arctic Ocean? What cities are on the western coast? In the south? What lakes are in Sweden? What large cities are on the Baltic? North of Stockholm? On the Cattegat?

Russia.—What countries border Russia on the north-west? On the south-west? What mountains form the north-eastern boundary? The south-eastern? What sea is on the south-east? On the south? What sea is between Russia and Sweden? What lakes flow into the Gulf of Finland? What river flows from Lake Ladoga? What city is on it? At its mouth? What is the south-western Province of Russia called? Which is the chief city of Poland? What large city is near the centre of Russia? (*Moscow*) What city is at the mouth of the Dwina? Of the Volga? On the Dnieper? On the Volga east of Moscow? On the Sea of Azov? On the Dnieper? On the Black Sea? Near the mouth of the Dnieper? On the Ural River? What large city is between Warsaw and St. Petersburg?

REVIEW EXERCISES.

Countries.—Where is it? How bounded? What is the chief town or city? Norway? Sweden? Russia? England? Scotland? Ireland? France? Spain? Portugal? Switzerland? Italy? Turkey? Greece? Montenegro? Servia? Roumania? Denmark? Holland? Belgium? Germany? Austria?

Islands.—Where situated?

Lofoden Islands? Iceland? Faroe Islands? Gothland? Aland Islands? Zealand? Nova Zembla?

Peninsulas.—From what part of Europe does it project?

Scandinavian? Jutland? Crimea?

Capes.—From what coast does it project?

North? The Naze?

Mountains.—Where are they?

Kiolen? Dovefield? Hardangerfield? Ural? Caucasus?

Seas and Gulfs.—Where is it?

White? Caspian? Azov? Black? Baltic? Finland? Bothnia? Riga?

Straits.—Between what lands? What waters does it connect?

Skager Rack? Cattegat? Sound? Kerch? Bosphorus? Dardanelles? Gibraltar?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what body of water?

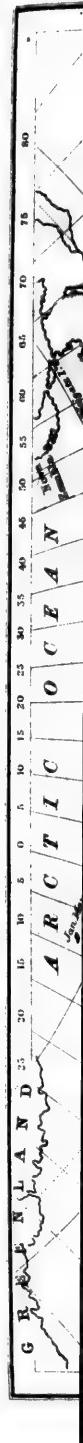
Dwina? Ural? Volga? Don? Dnieper? Vistula? Duna?

Lakes.—Where situated? What outlet has it?

Onega? Ladoga? Peipus? Ilmen? Wener? Wetter? Malar?

Cities and Towns.—In what country is it? In what part? On or near what water?

Christiania? Bergen? Trondheim? Hammerfest? Stockholm? Gotenburg? Norrkoping? Upsala? St. Petersburg? Cronstadt? Moscow? Warsaw? Odessa? Kiev? Riga? Vilna? Archangel? Nijni-Novgorod? Orenburg? Astrakhan? Taganrog? London? Liverpool? Newcastle? Edinburgh? Glasgow? Aberdeen? Dublin? Cork? Belfast? Paris? Lyons? Marseilles? Bordeaux? Madrid? Barcelona? Valencia? Seville? Malaga? Lisbon? Oporto? Berne? Rome? Naples? Milan? Constantinople? Athens? Cetigné? Belgrade? Bukharest? Copenhagen? Amsterdam? Brussels? Berlin? Hamburg? Buda-Pest?



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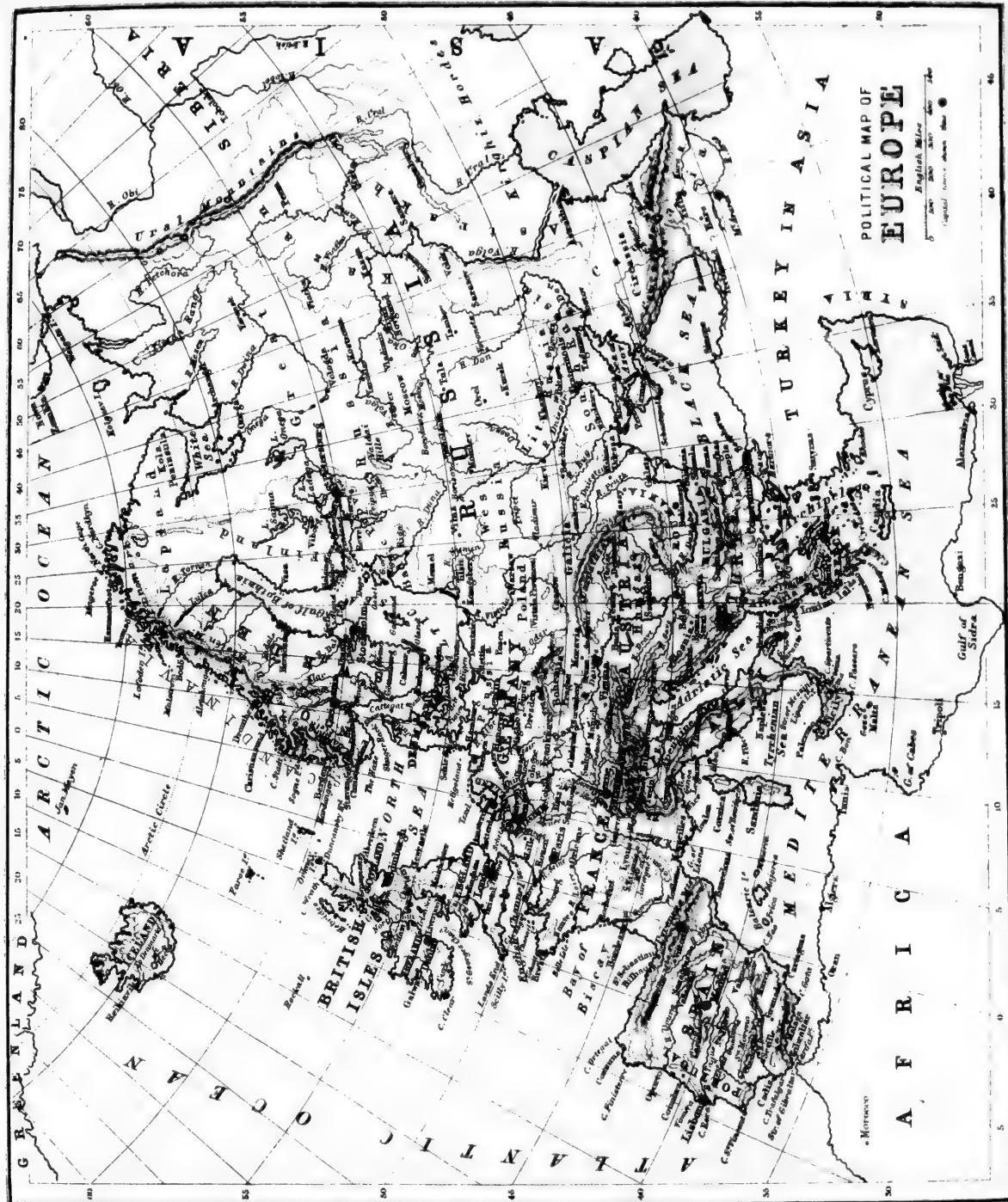
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DIVISIONS OF EUROPE.

The Political Divisions of Europe are :—

Four Empires—

RUSSIA (absolute),
GERMANY (limited).

AUSTRIA-Hungary (limited), **One Independent Principality**
TURKEY (absolute).

Two Republics—

FRANCE,
SWITZERLAND.

MONTENEGRO.

Twelve Kingdoms (limited monarchies).

GREAT BRITAIN and IRE-
LAND,
SWEDEN,
NORWAY,
SPAIN,
PORTUGAL,
ITALY,

GREECE,
ROUMANIA,
SERVIA,
DENMARK,
HOLLAND, or, the NETHER-
LANDS,
BELGIUM.

Included in these are :—The Grand-duchy of **Luxemburg** in the Netherlands; the Republic of **San Marino** and the Principality of **Monaco** in Italy; the Republic of **Andorra** in Spain; the Grand-duchy of **Finland** in Russia; the Principality of **Liechtenstein** in Austria; the Principality of **Bulgaria** in Turkey; and the various Kingdoms, Duchies, Principalities and Free Towns in Germany (see p. 20).

Great Britain, Russia, France, Germany, Austria, and Italy are termed the **Six Great Powers** of Europe.

The **Population** of Europe is much more dense in proportion to extent than that of any other of the Grand Divisions (see p. 20), especially in the western part, which contains about three-fourths of the whole (see Statistical Table, p. 20).

The people are nearly all of the Caucasian race—off-shoots of the great Aryan family, who originally settled in Western Asia, south-east of the Caspian Sea, and afterwards migrated into Europe.

The Laplanders in the extreme north; the Magyars (*Mah-jars*) in Hungary, and the Turks are of the Mongolian race.

The chief branches of the Caucasian race are :—The **Celtic**, settled in parts of western Europe; the **Teutonic**, occupying the country from the Alps to northern Norway, including the eastern part of Great Britain; the **Slavonic**, in the Great Lowland Plain; and the **Romanic**, to which the people of southern Europe mostly belong.

The **Christian Religion** prevails in Europe.

The people of the eastern half of Europe belong chiefly to the **Greek Church**; those of the north-western regions are principally **Protestants**; nearly all the rest, including more than half the population, are **Roman Catholics**. In Turkey there are about eight millions of **Mohammedans**, and, scattered among the various nations, are about 2,000,000 **Jews**.

The **Governments** of Europe are chiefly hereditary monarchies, and, with the exception of Russia and Turkey, are limited. France and Switzerland are the only Republics of note.

All the countries of Europe keep up enormous **Standing Armies** and **Fleets**, so as to be prepared in case of war. Except in Great Britain, service is compulsory, and in some of the countries *every man* is obliged to serve for a certain length of time.

The army of Russia on a war footing amounts to 2,420,000 men; that of Germany to 1,400,000; France, 1,500,000; Austria, 1,000,000; Italy, 734,000. In time of peace they are reduced to about one-third of these numbers. The army of Great Britain, including that of India, amounts to 214,000, but the great dependence of Great Britain is upon the fleet which is by far the most powerful in the world (see p. 67).

RUSSIA.

The **Russian Empire**, next to Great Britain, is the most extensive dominion in the world, including more than one-half of Europe, as well as more than one-third of Asia.

The Empire is said to comprise one-seventh of the territorial surface of the Globe—about the size of the whole of North America—and has a population of over 100,000,000.

The **Government** is an absolute monarchy under the Czar, or emperor, who is head both of church and state.

Russia in Europe comprises the whole of the eastern part of the Great Lowland Plain. It includes also the Grand-Duchy of Finland.

The **Inhabitants** are mostly Slaves (a Slavonic tribe of the Caucasian race), and belong to the Greek Church. The peasants are generally ignorant, and till 1863 were for the most part serfs, or slaves, owned by the Crown, the nobles, or large land-holders; in 1863 the serfs were emancipated.



ST. PETERSBURG: STATUE OF PETER THE GREAT.

A great portion of the surface of Russia is totally unfit for cultivation; in the north are the barren *Tundras*, and Finland covered with lakes interspersed with rocks and sand hills; in the south are the desert *Steppes* round the head of the Caspian Sea. Between the Baltic and Black Seas the country is fertile, producing abundance of grain, especially wheat and rye. In the south are extensive plains, where immense herds and flocks find pasture. Hemp and flax are extensively cultivated near the Baltic, and the immense forests of the Central Plain furnish valuable supplies of timber, tar, pitch, and large quantities of furs and skins from the wild animals they shelter. The Ural Mountains contain nearly all the mineral wealth of the country, producing gold, platinum, copper, iron, salt, and kaolin.

The foreign **Commerce** of Russia is chiefly with Great Britain and Germany; and by caravans with Asia, as far east as China, from which tea is brought.

The great rivers of the Lowland Plain, navigable almost to their sources, with their connecting canals, give access to the very heart of the country and furnish abundant means of internal communication,

Flax and hemp supply the materials for the principal **Manufactures**, as—canvas, sail-cloth, and rope. The great majority of the people are engaged in agricultural pursuits; rye is the staple food.

Much of the inland trade of Russia is carried on by means of yearly fairs, which are frequented by immense numbers of traders from all parts of Europe and Asia; that held at Nijni-Novgorod is the greatest in the world.

The **Exports** of Russia are wheat, flax-seed, hides, flax, hemp, tallow, and wool. These are mainly shipped from the Baltic ports; wheat is extensively exported from the Black Sea ports.

St. Petersburg, the capital, named after Peter the Great, the founder of the Empire, is the largest city and greatest commercial centre. **Moscow** is the ancient capital and emporium of the inland trade of the Empire; besides being the great railway centre of the country, it is connected by water with the Black, Caspian, and Baltic Seas. **Warsaw** is the chief city of the Province of Poland. **Riga** and **Cronstadt** (the sea-port of St. Petersburg, and the chief naval station), on the Baltic, export grain, hemp, and flax; **Odessa**, on the Black Sea, and **Taganrog**, on the Sea of Azov, are important grain ports. **Astrakhan**, on the Caspian Sea, is noted for its caravan trade with Asia and for its fisheries; it is also the centre of the maritime commerce on the Caspian Sea. **Archangel**, on the White Sea, exports linseed, rye, flax, and forest products; in winter the harbor is frozen. **Kiev**, **Kasan**, and **Tula** are important cities.

NORWAY AND SWEDEN.

Norway and **Sweden** occupy the Scandinavian Peninsula; Norway having the western, and Sweden, the eastern part.

The general boundaries between them are successive ranges of mountains, which extend under various names throughout the whole length of the peninsula.

Norway is the smaller and more mountainous, and contains less than one-half as many inhabitants as Sweden. Together they are about equal to the Provinces of Ontario and Quebec in size, but contain nearly double the number of inhabitants.

Norway and Sweden form two separate kingdoms, and each is governed by its own laws, but they are united under one king.

The **Climate** is much milder than in the same latitude in North America (see Physical Map). The soil is poor, except in the valleys and in the south, and but a small part of the country is capable of cultivation. Valuable forests of pine and fir compensate to a great extent for the sterility of the soil.

These countries are so far north that there is a great difference in the length of the day at different seasons. At North Cape the sun does not set from May 15th to July 29th.

The principal **Industries** of the people are mining, lumbering, and fishing.

The rocky islands, coasts, and deep fiords (long, narrow inlets, with precipitous banks), of Norway are inhabited by numerous birds, which furnish the elder-dow of commerce; and the cod-fishery on the coast of Norway is only equalled by that of North America. The iron mines of Dannemora, and the copper mines of Falun, in Sweden, are famous.

Manufactures are limited, in consequence of the want of coal, but Swedish iron, smelted with charcoal, the product of the forests, is of superior quality and is in demand for the manufacture of cutlery.

The **People**, nearly all of whom are Protestants, are a simple, but brave, hardy, industrious race. Education is in a backward state, but efforts are being made to promote it. The Norwegians are a sea-faring people, and their maritime commerce is considerable. In Sweden, railways and a system of canals from the Baltic to the Cattegat unite the internal with the maritime commerce. The lakes of Sweden cover about one-twelfth of its surface.

The **Exports** of Norway are chiefly fish and timber; those of Sweden, grain, iron, and copper.

Christiania, the capital of Norway, and **Bergen**, the largest Atlantic port, have a large trade in timber and fish. **Trondheim**, or Drontheim, the ancient capital, is a place of considerable commerce. **Hammerfest** is the most northerly town in Europe, and has a considerable trade in stock-fish, whale-, and seal-oil.

Stockholm, the capital of Sweden, is built on several small islands and peninsulas, at the junction of Lake Maelar with the Baltic. Its arsenal is famous. **Gottenburg** ranks next in importance for commerce. **Norrkoping** is a grain port. **Upsala** is celebrated for its university.

LAPLAND.

Lapland occupies the northern extremity of Europe within the Arctic Circle. Although divided between Russia, Sweden and Norway, it may be considered as one country, on account of the peculiar habits and character of the people. The whole population amounts to about 20,000, but of these only about 7,000 are Laplanders. The chief wealth of the Laplanders is the reindeer. They lead a wandering and barbarous life, and although professing Christianity, retain many Pagan superstitions. They are dwarfish in stature, seldom exceeding four and a-half feet in height.

DENMARK.

Denmark is the smallest of the Scandinavian Kingdoms, and consists of the islands of Zealand, Funen, and others, and of the northern part of the peninsula of Jutland.

In **Extent**, Denmark is smaller than Nova Scotia, but contains about as many inhabitants as Ontario.

The **Surface** is low and the climate moist but healthy. The chief **Industries** of the people are raising cattle, and fishing.

The **Exports**, chiefly to Great Britain, consist of cattle, grain, and dairy products.

Manufactures are unimportant, owing to the want of minerals and water-power.

The **Government** is a limited monarchy. The people are of the Teutonic race.

The **Foreign Possessions** of Denmark are **Greenland** and **Iceland**, and the **Faroe Islands**, in the North Atlantic; and in the West Indies, the islands of **Santa Cruz**, **St. Thomas**, and **St. John**.

Copenhagen, on the Island of Zealand, is the capital, and the residence of the King. It is the chief naval station. **Odensee** and **Aarhus**, on the Island of Funen, have considerable trade.

The **Faroe Islands** are 22 in number, but only 17 are inhabited, and the total population is little over 11,000.

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GREAT BRITAIN AND IRELAND.

The **British Empire** consists of the United Kingdom of Great Britain and Ireland, and of extensive possessions and colonies in every quarter of the globe.

It is the greatest empire that the world has ever known, both in the extent of country it comprises and in the number of people under its government. It is greater than the whole of North America in extent, and has a population of upwards of 300,000,000.

The **Centre of Government** is in Great Britain, which thus rules over an empire seventy times larger than itself. A Viceroy or Governor is appointed by the Crown to the various colonies or possessions. The latter are, however, practically independent, inasmuch as they make and administer their own laws and control their own revenues.

The **United Kingdom** of Great Britain and Ireland includes the islands of Great Britain (in which are comprised England, Scotland and Wales), the island of Ireland and numerous small adjacent islands.

In **Extent** the British Islands are one-third less in size than Ontario, but contain a population of about 36,000,000.

The chief **Industries** of Great Britain are its agriculture, mining, manufactures, and extensive maritime commerce.

Agriculture is carried to the highest state of perfection, and in Ireland it is the leading occupation.

The **Minerals** of Great Britain form a most important source of the wealth of the country—the principal are:—coal, iron, copper, lead and tin.

The **Annual Value** of the mineral products is about \$400,000,000, and the mines of Great Britain supply one half of all the coal, iron and tin used in the world. It is hardly possible to overrate the advantages Great Britain derives from its vast, and to all practical purposes, inexhaustible supply of coal and iron.

In **Manufactures**, Great Britain surpasses every other country. The most important are those of cotton, wool and iron.

Five-sevenths of all the cotton imported into Great Britain comes from the United States to be manufactured, and the export of manufactured cottons

amounts to the enormous sum of over 500,000,000 dollars annually. Great Britain builds iron steamships for the whole world.

The **Maritime Commerce** of Great Britain is the greatest in the world, and the supremacy of Great Britain cannot better be realized than by knowing that the British flag floats in every sea-port.

The **Mercantile Navy** belonging to the United Kingdom and British possessions in 1881 consisted of over 31,500 sailing vessels and 7,250 steamships, employing upwards of 365,000 seamen.

Great Britain sends its manufactures to every country on the globe, and its ships bring back food supplies and raw material for manufacture. Owing to the small extent of territory and the density of the population, Great Britain has to import a very large proportion of its food supplies. In 1881 the **Imports** of cereals amounted to over 300,000,000 dollars, and those of cattle and meat to over 200,000,000.

These, together with tea, sugar, coffee, tobacco, and other foreign articles of consumption, form the chief imports; except raw materials for manufacture, which amount to 650,000,000 dollars annually.

Great Britain is covered with a network of **Railways**, which have cost upwards of 3,700,000,000 dollars, and provide unequalled facilities for internal communication.

This commerce is protected by the largest **Navy** that has ever existed, comprising 74 armor-plated steamships, about 360 steamships (not iron-clad), and 120 sailing ships; out of these 253 are actually in commission.

Fortified **Naval Depots** for coal and provisions have been established on all the great routes of maritime trade. Among these depots are:—**Gibraltar**, at the entrance, **Malta** in the middle, and **Cyprus** in the eastern part of the Mediterranean Sea; **St. Helena**, **Cape Town** and **Mauritius** on the south African coast; **Aden** at the mouth of the Red Sea; **Hong-Kong** at one end of the China Sea and **Singapore** at the other; **Jamaica** and other islands of the West Indies; **Halifax**, in Nova Scotia; the **Bermudas**, and the **Bahamas** off the coast of North America; **Vancouver Island** in the Pacific, with many others in India and Australia, besides home depots.

The **Government** of Great Britain is a limited monarchy, consisting of a Sovereign and a Legislature, or Parliament, —the House of Lords and the House of Commons.

The members of the **House of Lords** are the peers or nobles of England and of the United Kingdom, who hold their seats by virtue of hereditary right, with representatives of the nobles of Scotland and Ireland, and the Archbishops and Bishops of England and Wales. The members of the **House of Commons** are elected by the people. No legislative measure is complete without the joint assent of the Sovereign and the two Houses of Parliament.

The true power and the entire responsibility of the Government are in the hands of a small body of men, called the **Ministry**; they are appointed by the Sovereign, through the influence of the Commons. The Prime Minister, or chief of the ministry, is practically the real ruler of the empire; if opposed by a majority of the House of Commons, he resigns his position, and the Sovereign appoints his successor. The Government of the British Empire presents the nearest approach to a true Commonwealth that has ever existed,

The annual revenue of Great Britain derived chiefly from the customs and

excise duties is about 420,000,000 dollars, besides that of British India, which amounts to about 350,000,000. The National Debt, incurred in times of war when the expenditure exceeded the revenue, is now about 3,800,000,000 dollars.

The **People** of Great Britain belong chiefly to the Teutonic race, but in the highlands of Scotland and Wales the Celtic race predominates. In Ireland the main population is Celtic.

There are two State Churches in Britain—the **Episcopal**, or Church of England, in England and Wales, and the **Presbyterian** in Scotland. The Protestant Episcopal, which was formerly the **State Church in Ireland**, was in 1871 separated from the State. All denominations throughout the empire have equal liberty.

COLONIES AND POSSESSIONS OF GREAT BRITAIN—STATISTICAL REFERENCE TABLE.

* These figures do not include the garrison.

The **British Possessions** in Europe are:—**Gibraltar**, an important fortress at the southern extremity of Spain, commanding the entrance to the Mediterranean Sea; **Malta**, an important island in the Mediterranean; and **Heligoland**, a small island in the German Ocean opposite the mouths of the Elbe and Weser.

The **Isle of Man**, a small island of Great Britain, in the Irish Sea, has an independent Legislature called the *Tynwald*. It is rich in minerals, and exports agricultural products. **Castletown** is the capital.

The **Channel Islands** comprise the bailiwicks of Jersey and Guernsey (in

the latter of which are included the small islands of Alderney, Sark and Herm). Though situated near the coast of France, they are dependencies of the British Crown, and are the only portions of the Dukedom of Normandy now belonging to England, to which they have been attached ever since the conquest. The Legislatures, called the "States," have a somewhat independent status under a Lieutenant-Governor, and a chief civil officer called a Bailiff, who are appointed by the Crown. French is the general language. The exports are chiefly agricultural produce, and the islands are celebrated for their breeds of cattle and for their genial climate.

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AREA IN MILES.	POPULA- TION.
6,948	751,468
13	471
1,198	862,346
1,520	213,525
6,690	279,865
1,000	31,000
.....	55,000
2,213	115,705
1,970	489,033
.....	44,000
1,034	124,858
5,578	2,968,190

750	1,364,151
750	413,167
537	74,696
1,000	408,070
73	75,270
713	377,373
47	5,059
79	132
949	2,717,921

991	6,016,077
126	175,186
108	202,113,178
1,578	2,968,190
949	2,717,921
464	54,151,757
216	268,142,309

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ENGLAND & WALES

English Miles
Roman Miles

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Channel

What country
is separated from
England by the
North Sea?

Which are
the ten north-most
towns in England?

The four east
coast towns in
South Wales?

Which are
the western points
on the coast of
Wales? How far
is the coast of
South-west England?

What large
city is on
the coast of
the Mersey?
Avon? On
the river
Derby? On
the river
Avon? On
the river
Mersey? On
the river
Tees? What
large town
is in
Yorkshire?
Aire? On
the river
Humber? On
the river
Humber? In
Hampshire?
In the south
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What islands
are in the
Mediterranean?

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QUESTIONS ON THE MAP.

What country is north-west of England? By what hills and rivers are they separated? Where is Wales situated? What country is south of England? By what strait and channel are they separated? What sea is to the east? From what countries does it separate England? What large island is west? How is it separated from England? What mountains are in the north? In the west? What hills in the south? What principal rivers flow into the North Sea? Into the Irish Sea? Into the Bristol Channel? What is the general direction of the rivers? What lakes are in the north-west?

Which are the six northern counties of England? The six southern? The ten north-midland? The ten south-midland? The four adjoining Wales? The four eastern? Which are the six counties of North Wales? The six of South Wales? Which counties border on Scotland? On the North Sea? On the English Channel? On the Atlantic Ocean? On the Irish Sea?

What bays and estuaries are on the east coast? On the south coast? On the west coast? What island is south of Hampshire? How is it separated from the mainland? What island is in the Irish Sea? What island north-west of Wales? How is it separated from the mainland? What islands are off the coast of Northumberland? What island west of Anglesey? What islands south-west of Cornwall? (See Map of Europe.)

Which are the principal capes on the east coast? On the south? On the west? What sands are at the entrance to the Strait of Dover? What anchorage between the Goodwin Sands and the coast of Kent? What is the extreme south-western point of England called?

What large city is on the Thames? What large city at the mouth of the Mersey? On the Avon? On the Humber? On the Tyne? What large city east of Liverpool, in Lancashire? What large city in Yorkshire on the Ouse? On the Aire? On the Don? What important city in Cambridgeshire? In Hampshire, opposite the Isle of Wight? In the south of Devonshire? In the northeast of Warwickshire? What large cities on the Trent River? What three large cities in Glamorganshire?

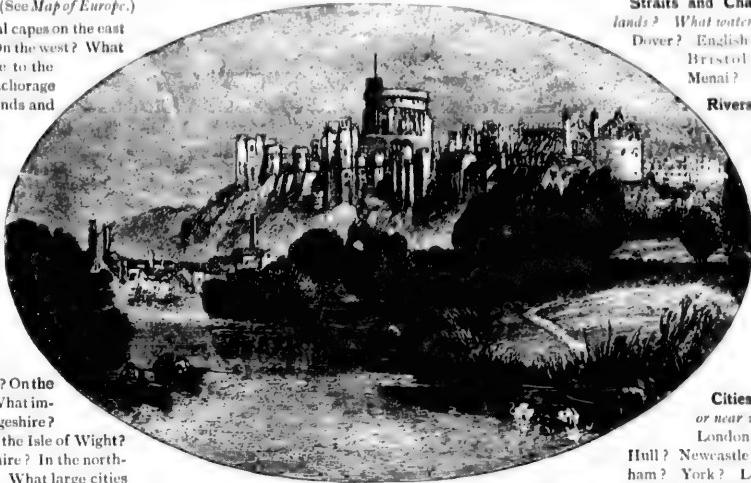
What islands off the northern coast of France belong to Great Britain? What islands in the Mediterranean? What possession at the entrance to the Mediterranean? What island near the mouth of the Elbe? (See Europe.)

ENGLAND AND WALES.

England and Wales occupy the southern part of the Island of Great Britain. England may be said to be divided from Scotland by the Solway Firth, the Cheviot Hills and the River Tweed.

It is the largest, most populous, and wealthiest country of Britain, being nearly as large as the whole of Scotland and Ireland together, and containing three times their population. It is, however, but little more than half the size of the Province of Ontario.

The **Surface** of England, except in the west and north, is level or undulating. It is virtually a continuation of the plain



WINDSOR CASTLE.

REVIEW EXERCISES.

Countries. —Where situated? How bounded?

England? Scotland? Ireland? Wales?

Islands. —In what direction from the nearest land? By what waters surrounded?

Wight? Man? Anglesey? Holy? Farne? Scilly?

Capes. —From what part of the country does it project? Into what water?

Flamborough Head? North Foreland? South Foreland? Beachy Head? St. Catherine's Point? Start Point? The Lizard? Portland Bill? Land's End? St. David's Head? Holyhead? St. Bees' Head?

Mountains and Hills. —In what part of the country are they? In what direction do they extend? In what counties?

Cheviot? Cambrian? Pennine? Chiltern? Cotswold? Mendip?

Seas, Bays and Estuaries. —What coast and what counties does it indent or wash? Of what other body of water is it an arm?

Solway Firth? North? Irish? Tees? Humber? Wash? Thames? Southampton Water? Plymouth Sound? Mount? Severn? Milford Haven? Carmarthen? Cardigan? Dee? Mersey? Morecambe? Carnarvon?

Straits and Channels. —Between what lands? What water does it connect?

Dover? English? St. George's? North?

Bristol? Solent? Spithead?

Mona? Downs?

Rivers. —Where does it rise?

Through what counties does it flow? Into what water?

Tweed? Tyne? Tees?

Humber? Ouse? Trent?

Thames? Medway?

Mersey? Severn?

Avon?

Lakes. —Where situated?

Derwentwater? Ullswater? Windermere? Coniston?

Cities. —In what county? On or near what water?

London? Liverpool? Bristol?

Hull? Newcastle? Manchester? Birmingham? York? Leeds? Bradford? Cambridge? Portsmouth? Plymouth? Stoke (on Trent)? Nottingham? Oxford? Mer-

thyr-Tydvil? Swansea? Cardiff? Windsor?

British Possessions in Europe. —Where situated?

Channel Islands? Gibraltar? Malta? Heligoland?

of France, the mountains in the west and north forming as it were a barrier to the ocean. Wales is mountainous and has great mineral wealth.

In the north are the **Cheviot Hills** and the **Pennine**, or Cumbrian range; in the west are the **Cambrian Mountains**; these seldom exceed 3,000 feet in height. The highest summits are in Wales where Snowdon rises 3,571 feet. Other minor ranges occur—as the **Chiltern Hills**, the **Cotswold Hills**, and the **Mendip Hills**.

The **Rivers** of England are numerous but small. Many are navigable for vessels, and their mouths form excellent harbors, as—the **Thames**, **Medway**, **Mersey**, **Severn**, **Tyne**, and **Humber**.

The **Lakes**, though insignificant in size, are justly celebrated for their beauty, being situated among the highest mountains in



in England; **Derwentwater**, **Ullswater**, **Windermere**, and **Coniston Water** are the principal.

The **Climate** of England, though variable, and somewhat moist, particularly in the western parts of the island, is, generally speaking, mild and healthful.

The **Soil**, especially in the midland, eastern and southern counties is distinguished for its fertility and for the high state of cultivation in which it is kept. In the north there are some barren tracts, and in the east are extensive fens or marshes.

The chief **Minerals** of England are coal, iron, tin, lead, copper and salt; of Wales, coal, iron and copper.

The **Manufactures** of England are most extensive, especially in cotton, woollen and silk goods, iron and earthenware.

The chief seat of the cotton manufactures is in Lancashire; of the woollen, in Yorkshire; and of iron and earthenware, in Staffordshire.

England is divided into **Forty Counties** or shires, and Wales into **Twelve**. These may be grouped into six northern and six southern, ten north midland and ten south midland, four eastern and four adjoining Wales; and in Wales, six in north and six in south Wales.

QUESTIONS ON THE MAP.

What country is south-east of Scotland? How is Scotland separated from England? What large island is to the south-west? What separates Ireland from Scotland? What ocean is on the west? What sea on the east? What mountains cross Scotland near the centre? What hills are in the south? What principal rivers flow into the North Sea? What river into the Firth of Clyde? What is the general direction of the Scottish rivers? What connection is there between Loch Linnhe on the west and the Moray Firth on the east? In what part of Scotland are the Highlands? What lake is in Dumfriesshire? In Ayrshire? In Perthshire?

Which are the eleven northern counties of Scotland (including Orkney and Shetland as one county)? Which are the nine middle? Which are the thirteen southern? Which border on England? On the North Sea? On the Irish Sea and North Channel? On the Atlantic Ocean?

What firths are on the east coast? What principal firths and lochs are on the west coast? What bay in the south of Wigton? What two groups of islands are west of Scotland? Which are the largest islands of the Outer Hebrides? How are the Outer Hebrides separated from Skye and the mainland? What two groups of islands lie to the north of Scotland? How are the Orkney Islands separated from the mainland? Which are the principal islands in the south-west? What large island is between the Outer Hebrides and the mainland? What island at the mouth of Loch Linnhe? What sound is between Arran and Bute? Between Jura and Cautire? Between Islay and Jura? Between Mull and the mainland? Between Skye and the mainland? Which are the principal capes on the east coast? On the north? On the west? On the south? What is the extreme north-east point of Scotland called?

What large city is near Leith on the Firth of Forth? What large cities on the Clyde? On the River Dee? On the Firth of Tay? At the northern end of the Caledonian Canal?

SCOTLAND.

Scotland occupies the northern part of the Island of Great Britain, and is much smaller in extent and population than England. It includes also the Hebrides, Orkney, Shetland and other islands.

London, the capital and metropolis of the British Empire, is the largest, most populous, and wealthiest city in the world. It is the great centre for commerce, and stands pre-eminent in magnificence, literature and science. It covers 122 square miles, and contains many celebrated buildings—Westminster Abbey, the Tower, St. Paul's Cathedral, the Parliament Buildings, Buckingham Palace, and others. **Liverpool** is next to London in commerce, population and wealth; it is the centre for the American trade, and is famous for its magnificent docks. **Manchester** is the principal city for manufactures, and is the great centre of the cotton trade. **Birmingham** is celebrated for its metallic manufactures; **Sheffield**, for its cutlery and hardware; **Leeds** and **Bradford**, for woollen goods; **Stoke (upon Trent)** for pottery; **Nottingham**, for hosiery and laces. **Bristol** and **Hull** are important shipping ports; **Newcastle** and **Sunderland** are the centres of the coal trade; **Portsmouth** and **Plymouth** are the principal naval stations; **Oxford** and **Cambridge** are the seats of celebrated universities; **Windsor**, with its magnificent Castle, is the ancient and favorite residence of the Sovereigns of England. **Merthyr-Tydfil** and **Swansea** are important cities in Wales, with an extensive coal, iron, and copper trade.

REVIEW EXERCISES.

Islands.—In what direction from the nearest land? By what water surrounded?

Inner Hebrides? Outer Hebrides? Orkney? Shetland? Bute? Arran? Islay? Jura? Mull? Skye? Lewis? Harris? North Uist? South Uist?

Capes.—From what part of the country does it project? Into what water? St. Abb's Head? Fife Ness? Kinnaird Head? Tarbet Ness? Duncansby Head? Dunnet Head? Wrath? Butt of Lewis? Mull of Oe? Mull of Cantyre? Corsill Point? Mull of Galloway? Burrow Head?

Mountains and Hills.—In what part of the country are they? In what direction do they extend? In what counties?

Grampians? Cheviot? Lowther? Pentland? Ochill? Lammermuir?

Seas, Bays, Lochs and Firths.—What coast and what counties does it indent or wash? Of what other body of water is it an arm?

North Sea? Forth? Tay? Moray? Dornoch? Lorn? Linnhe? Fyne? Clyde? Solway? Luce?

Straits, Firths and Sounds.—Between what lands? What waters does it connect?

Caledonian Canal? Pentland? Bute? Jura? Islay? Mull? Sleat? Minch? Little Minch?

Rivers.—Where does it rise? Through what counties does it flow? Into what water?

Clyde? Tay? Forth? Dee?

Lakes or Lochs.—Where situated? What outlet has it? Ness? Katrine? Lomond? Awe?

Cities.—In what county? On or near what water? Edinburgh? Leith? Glasgow? Greenock? Aberdeen? Dundee? Inverness? Paisley?

In Extent Scotland is a little larger than the Province of New Brunswick, but has a population of nearly 4,000,000.

The **Surface**, like that of England, is divided into the **Highlands** of the west and north, and the **Lowlands** of the south and south-east; but it is in general much more mountainous than that of England.

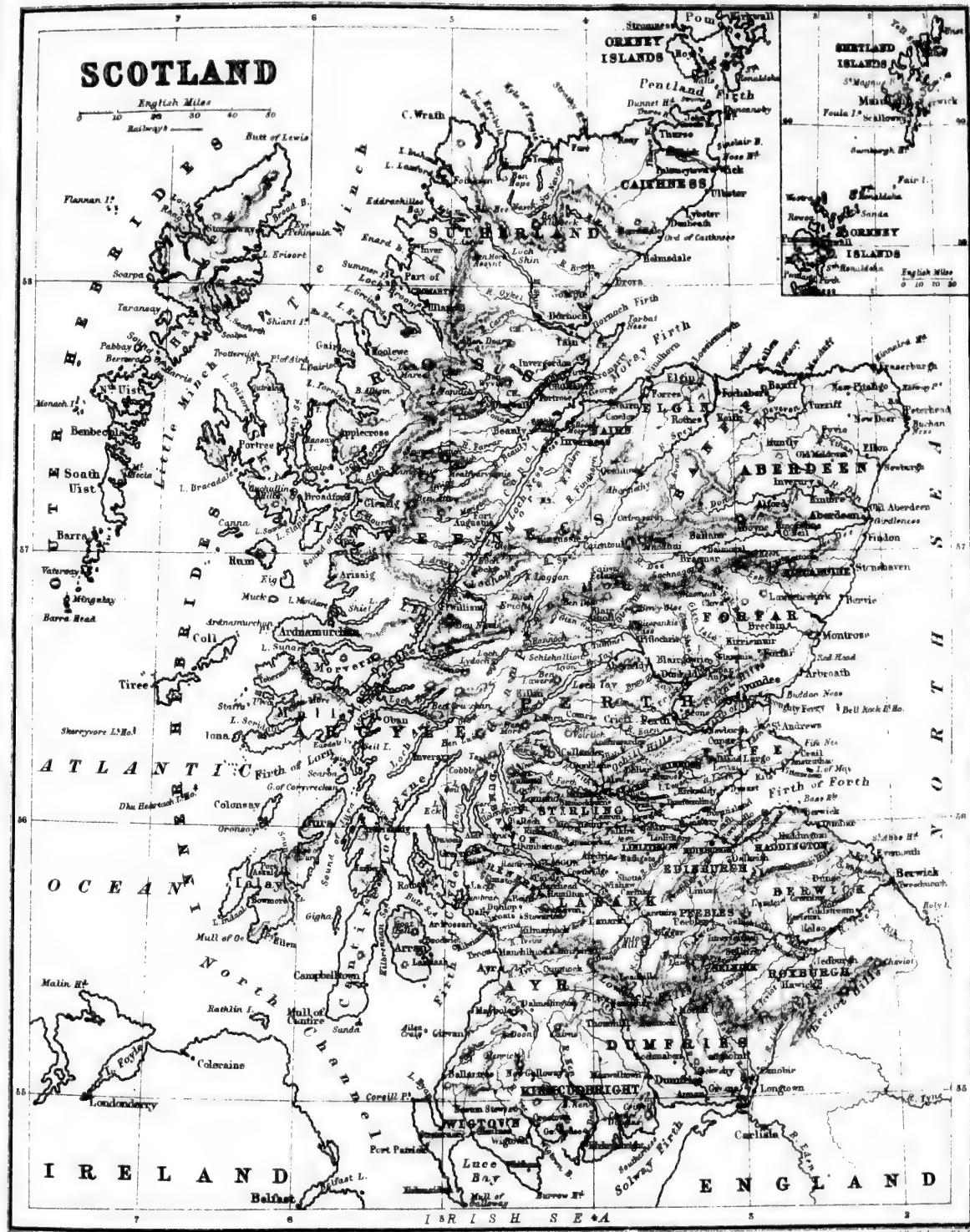
British Empire, is in the world. It is pre-eminent in its 122 square miles, Westminster Abbey, Parliament Buildings, is next to London the centre for the great docks. Mansfield, and is the great celebrated for its iron and hardware; Stoke (upon Trent) is a great centre. Bristol and Gloucester and Sunderland and Plymouth and Plympton and Cambridge; Windsor, with its great residence of and Swansea are the coal, iron, and

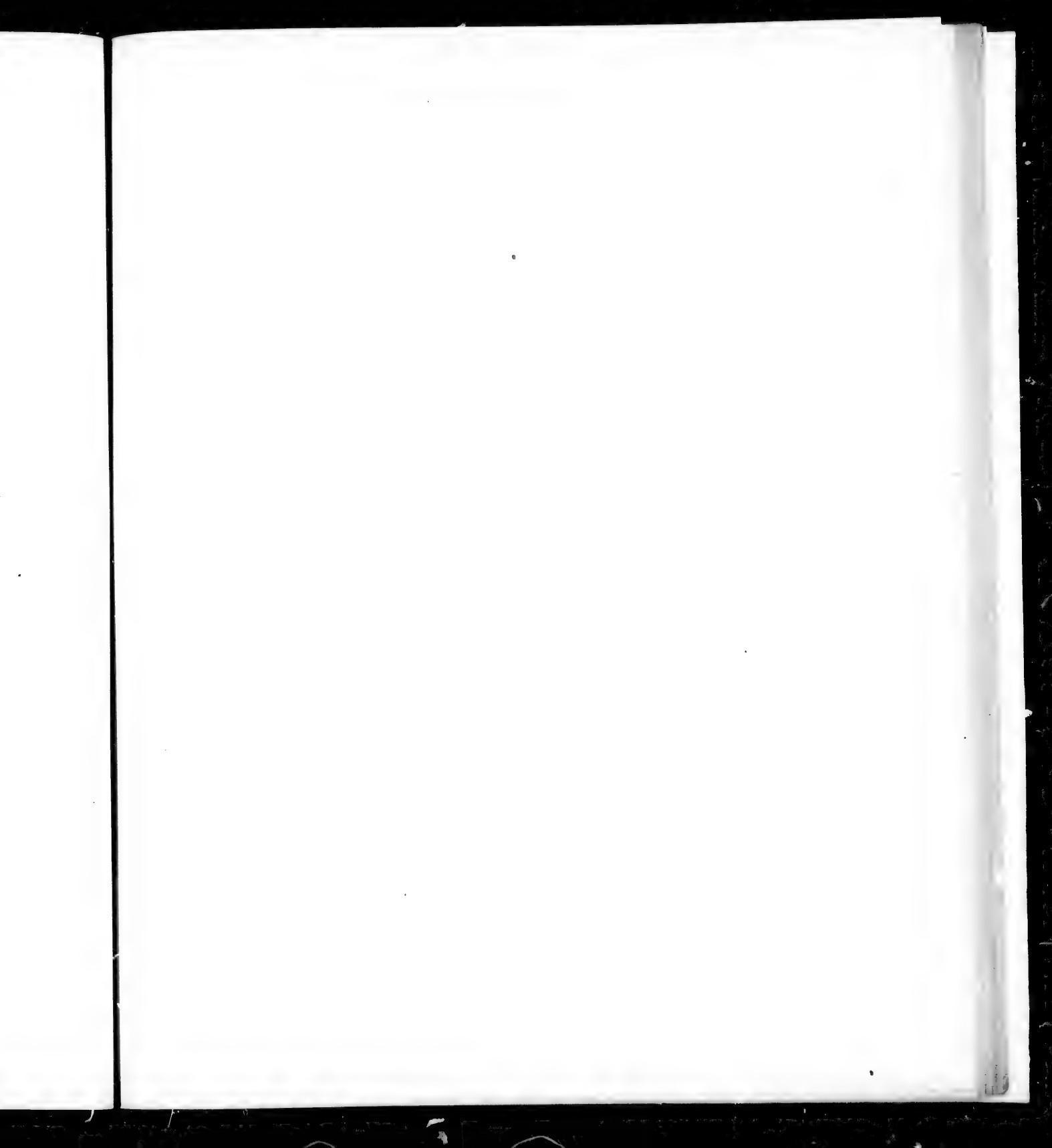
By what water surface? But? Arran? South Uist? South Uist? What? Into what water? Ness? Ness? Duncansby Head? Mull of Oe? Mull of Head?

are they? In what hill? Lammermuir? What counties does it include? Linne? Fyne? What waters does it have? Mull? Sleat? Does it flow? Into what river?

n? Dundee? Inver-

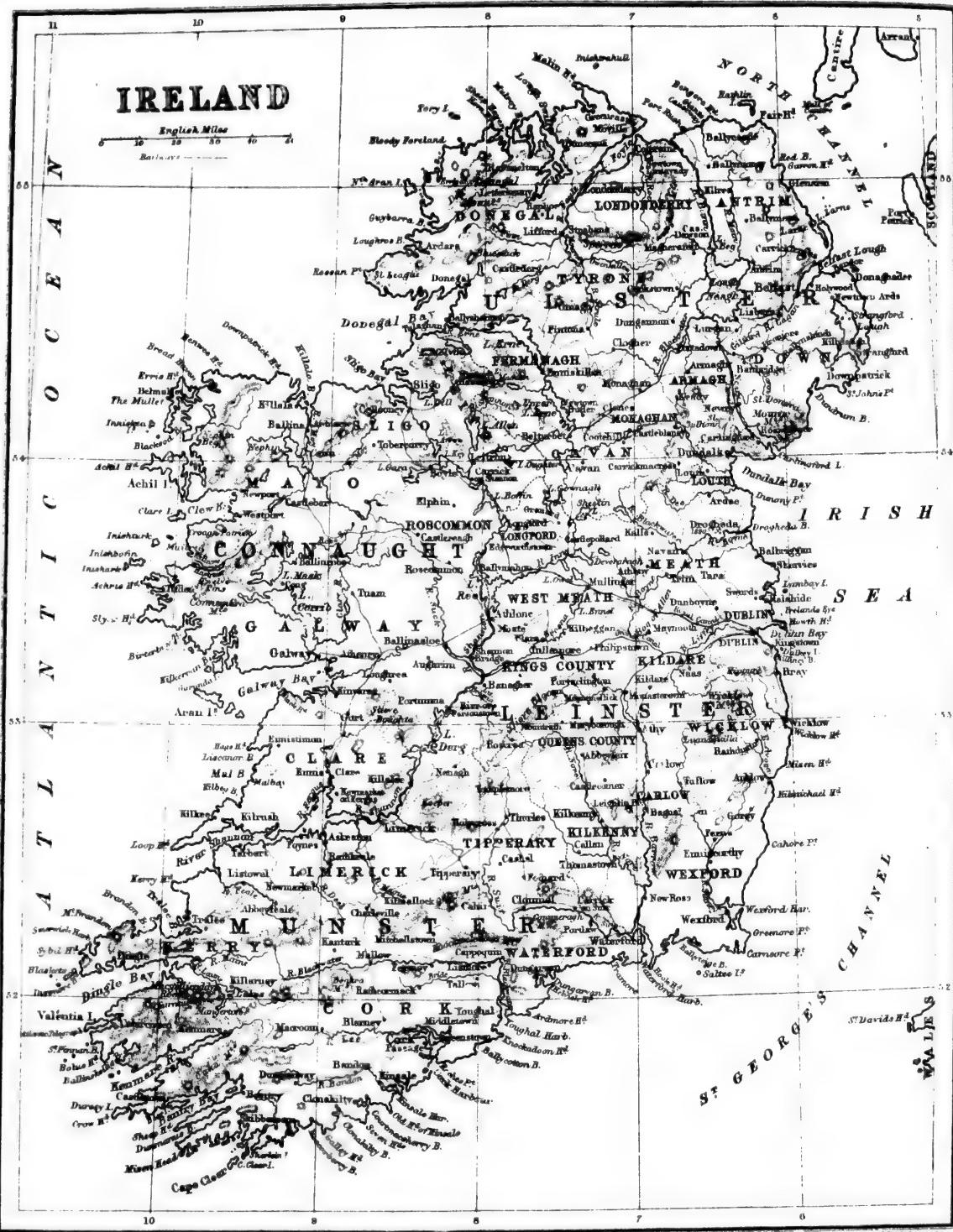
e of New Brunswick, and into the Highlands of the south more mountainous





IRELAND

English Miles



The Inhabitants generally spoke the language of Cen-

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others.

The **Coast** is deeply indented by **Lochs**, and the north is surrounded by numerous islands.

On the west coast of Scotland, between the Linnhe and the Sound of Mull, lie the Outer Hebrides, stretching from the north, through the Shetland Islands, to the mainland of Scotland, and the Firth of Clyde.

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What large city is on the coast of Galveston Bay?

The **Inhabitants** of these two great divisions of Scotland are, generally speaking, of different races; those of the Highlands being of Celtic origin and speaking their mother tongue, the Erse or Gaelic; and those of the Lowlands of Teutonic origin, and speaking a dialect of the English or Anglo-Saxon. The inhabitants of the northern islands are chiefly of Norse, or Scandinavian origin.

The principal mountain range is the **Grampian Mountains**, which form the natural rampart between the Highlands and Lowlands; the highest summit is Ben Macdui (4,338 feet). Other smaller ranges of hills, offshoots of the **Cheviot Hills**, which divide Scotland from England, are in the south the **Laumernavie**, the **Pentland** and **Ochil Hills**.

The **Rivers** of Scotland are small, like those of England, but many have broad estuaries, forming important harbors or **Firths**, as the **Forth**, **Tay**, **Moray**, **Dornoch**, **Solway**, **Clyde** and **Lorn** Firths.

The Lakes, or **Lochs**, of Scotland, though small, are celebrated for their picturesque scenery and historical interest, as **Lomond**, **Katrine**, **Awe**, **Leven** and others.

The **Coast** of Scotland is deeply indented by bays, or **Lochs**, and on the west and north is surrounded by numerous islands.

On the west coast are Lochs **Linne** and **Fyne**, the **Inner** and **Outer Hebrides Islands**; and on the north, the **Orkney** and the **Shetland Islands**, separated from the mainland by the **Pentland Firth**.

The **Hebrides** consist of about 170 islands, of which seventy are inhabited. The inner group comprises Staffa and other islands, celebrated for their basaltic foundation.

Of the **Orkney Islands**, numbering about sixty-seven, there are twenty-

nine inhabited, and of the **Shetland Islands**, numbering 100, there are thirty-four inhabited. The chief industry is fishing.

Stornoway is the chief town of the Hebrides. **Kirkwall** of the Orkney Islands, and **Lerwick** of the Shetland Islands.

The **Climate** of Scotland is somewhat colder and more moist than that of England. The **Soil** in the Lowlands is fertile, and agriculture is carried to the greatest perfection; the Highlands, with the exception of a few fertile valleys, are unfit for cultivation, and are only available for pasture and for hunting-lands.

The chief **Minerals** of Scotland are coal, iron, lead and stone.

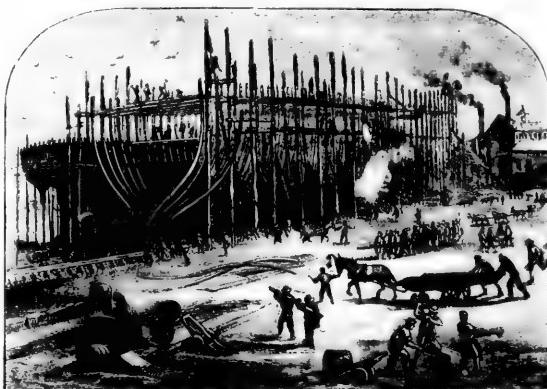
The **Manufactures** of Scotland are important, especially in iron ship-building, machinery, and cotton, linen and woollen goods.

Scotland is divided into **Thirty-three Countries**, or shires, eleven northern, nine middle, and thirteen southern.

Edinburgh, the capital of Scotland, has been long known as a seat of science and literature. It carries on an extensive trade through Leith, its sea-port, which is about two miles distant.

Glasgow is the largest city, and with its suburbs ranks second in size in Great Britain. It is the leading manufacturing city, the chief seat of foreign commerce, and is famous for iron-building.

Greenock is the sea-port for Glasgow. **Dundee**, an important sea-port, has extensive manufactures of sail-cloth and other coarse fabrics. **Paisley** is noted for its manufactures of cotton and shawls. **Aberdeen** is the principal town in the north of Scotland. **Inverness** is the capital of the Highlands.



BUILDING OF IRON SHIPS ON THE CLYDE

QUESTIONS ON THE MAP.

How is Ireland separated from England? From Scotland? What ocean is on the west? What mountains are in the south-west? West? North? South-east? What principal river flows west? Through what lakes? What principal river flows south? What two rivers flow north? What lake does the Bann drain? The Erne? What lakes are in the south-west? In Connaught?

Which is the northern Province of Ireland? The western? The southern? The eastern? What nine counties are in Ulster? What five in Connaught? What six in Munster? What twelve in Leinster?

Which are the principal bays and loughs in the west coast? On the north? On the east? On the south? What small islands are off the north shore? (*Tory Island is usually the first land sighted by the Canadian steamships calling at Lough Foyle.*) What island is at the mouth of Dingle Bay? For what is it noted? Which are the principal capes on the west coast? On the north? On the east? On the south? What is the most southerly point called?

What large city is near Dublin Bay? What is its sea-port? What large city is on the Shannon? What important harbor in Cork County? What city? What city on Loch Foyle? What large city on Belfast Lough? What city in Galway? What city on the Suir?

REVIEW EXERCISES.

Islands. —In what direction from the mainland? By what waters surrounded?

Tory? Rathlin? Valentia?

Capes. —From what part of the country does it project? Into what water? Malin Head? Bloody Foreland? Erris Head? Slyne Head? Loop Head? Clear? Carnsore Point? Howth Head? St. John's Point? Fair Head?

Mountains. —In what part of the country are they? In what counties? Kerry? Magilicuddy's Reeks? Connemara? Donegal? Wicklow?

Seas, Bays and Loughs. —What coast and what counties does it indent or wash? Of what other body of water is it an arm?

Donegal? Sligo? Killala? Clew? Galway? Shannon? Dingle? Kenmare? Bantry? Cork? Waterford? Wexford? Dublin? Dundalk? Carlingford? Belfast? Foyle? Swilly?

Rivers. —Where does it rise? Through what countries does it flow? Into what water?

Shannon? Barrow? Suir? Foyle? Bann? Erne?

Lakes. —Where situated? What outlet has it?

Allen? Ree? Derg? Neagh? Erne? Killarney? Conn? Mask? Corrib?

Cities. —In what country? On or near what water?

Dublin? Kingstown? Cork? Limerick? Queenstown? Londonderry?

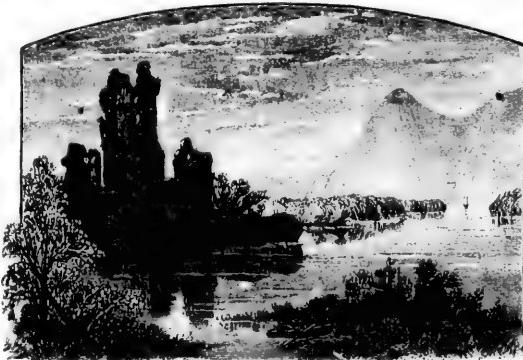
Belfast? Galway? Waterford?

IRELAND.

Ireland is an island in the Atlantic Ocean, situated to the west of Great Britain, from which it is separated by the Irish Sea and St. George's and North Channels.

In Extent it is about the same as Scotland, but is more densely populated.

The Surface of Ireland is, in general, flat or undulating, with numerous hills, rising in detached groups near the coast, as the **Wicklow Mountains** (Mt. Lugnaquilla, 3,039 feet high); the **Kerry Mountains** (Mt. Brandon, 3,120 feet high); with **Maugilicuddy's Reeks** (Carn Tual, 3,410 feet); the **Connemara Mountains**, and the **Donegal, Antrim** and **Mourne Mountains**. The middle part of the country is a level plain extending from sea to sea; and between Dublin and Galway Bays, the greatest elevation does not exceed 120 feet.



RUINS OF ROSS CASTLE, LAKE KILLARNEY, IRELAND.

Ireland is noted for its extensive **Bogs**, which cover about one-seventh of its surface. The peat-bogs afford fuel to the inhabitants of the inland part of the country.

QUESTIONS ON THE MAP.

France.—What countries are east of France? What country south-west? What large island in the Mediterranean belongs to France? How is it separated from Sardinia? What mountains are on the borders of France? In the interior? What two rivers flow into the Bay of Biscay? What one into the English Channel? Into the Gulf of Lions? What is the general direction of the rivers? What cities are on the north coast? What water is on the north? On the west? What gulf on the south? What cities are on the Seine River? Which is the capital? What city is its sea-port? What large city is in the north near Belgium? On the Rhone? South-west of Lyons? On the Gulf of Lions? Near Marseilles? On the Loire? What two cities on the Garonne? What two ports in the north-west? What islands belonging to Great Britain are off the north coast? What island is off the extreme north-west?

Switzerland.—What countries border on Switzerland? What mountains are in the south and east? On the western border? What lake is on the north-eastern border? What river flows through it? What lake is on the south-western border? What river flows through it? What city is at its outlet? What other lakes are in Switzerland? What city is on the Rhine? What city is on a lake east of Basle? What city is the capital? Which is the highest peak of the Alps? (*Mount Blanc*.)

Spain.—What country is north-east of Spain? How are they separated? What country to the west? What continent to the south? How are they separated? What mountain ranges are in Spain? What four rivers flow

The Lakes, or Loughs, are numerous, and, like those of England and Scotland, are celebrated for the picturesque beauty of their scenery. The **Lakes of Killarney** in Kerry are famous.

The **Coast-line** of Ireland, like that of Scotland, is deeply indented by bays, especially on the west, north and south, where it is exposed to the full force of the Atlantic Ocean. These form numerous excellent harbors where the largest ships can ride in safety.

The **Climate** of Ireland is mild and genial, but very wet, owing to the prevalence of westerly winds. The **Soil** is very fertile, but is not so well cultivated as that of Great Britain.

Ireland is noted for its excellent pasture and beautiful verdure, which are due principally to the moisture it receives from the Atlantic, and to its position in regard to the Gulf Stream and the warm Return south-west winds.

The principal **Industries** of Ireland are agriculture, stock-raising, and in the north the linen manufacture.

Minerals—copper, lead and iron—are found, but are not worked to any extent, owing chiefly to the inadequate supply of coal.

Ireland has comparatively little **Commerce**, although it possesses such admirable natural advantages.

The **Exports** are chiefly agricultural products, linen, copper and lead-ore, which are generally shipped to England.

The Irish National system of **Education** is very complete, and the higher education is also well supplied. Three-fourths of the people are Roman Catholics.

Ireland is divided into **Four Provinces**, which are again sub-divided into **Thirty-two Counties**; Ulster, nine counties; Leinster, twelve; Munster, six; and Connaught, five counties.

Dublin is the capital and the residence of the Viceroy or Lord Lieutenant of Ireland. **Kingstown**, its harbor, is distant seven miles. **Belfast** is the centre of the linen-trade. **Cork**, **Limerick** and **Galway** are important cities. **Queenstown** (Cork Harbor) and **Londonderry** are ports of call for the ocean steamers.

into the Atlantic Ocean? What one into the Mediterranean? What two capes are on the north-west coast? What cape on the north-east? What fortified promontory belonging to Great Britain is at the southern point of Spain? What city is the capital? What port is in the north-east? What two ports in the east? In the south? What city is on the Guadalquivir River? East of Seville? North-east of Granada? What islands are to the east? Which is the largest? What is the capital? What islands off the coast of Africa belong to Spain? What is the capital?

Portugal.—What position does Portugal occupy? What mountain range crosses Portugal? What three rivers? What port is near the mouth of the Douro? What city is the capital? On what river? What cape is at the south-western extremity? What islands in the Atlantic belong to Portugal? What is the capital? What islands off the coast of Africa? What is the capital?

REVIEW EXERCISES.

Islands.—In what direction from the nearest land? By what waters surrounded?

Corsica? Channel Islands? Ushant? Balearic? Majorca? Canary? Madeira? Cape Verde?

Capes.—From what part of the country does it project? Into what water? De la Hague? Point du Sillon? Gris-Nez? Raz? St. Mathieu? Ortegal? Finisterre? Creux? Gibraltar? St. Vincent?

Seas and Bays.—What coast does it indent or wash? Of what body of water is it an arm?

English Channel? Biscay? Lions?

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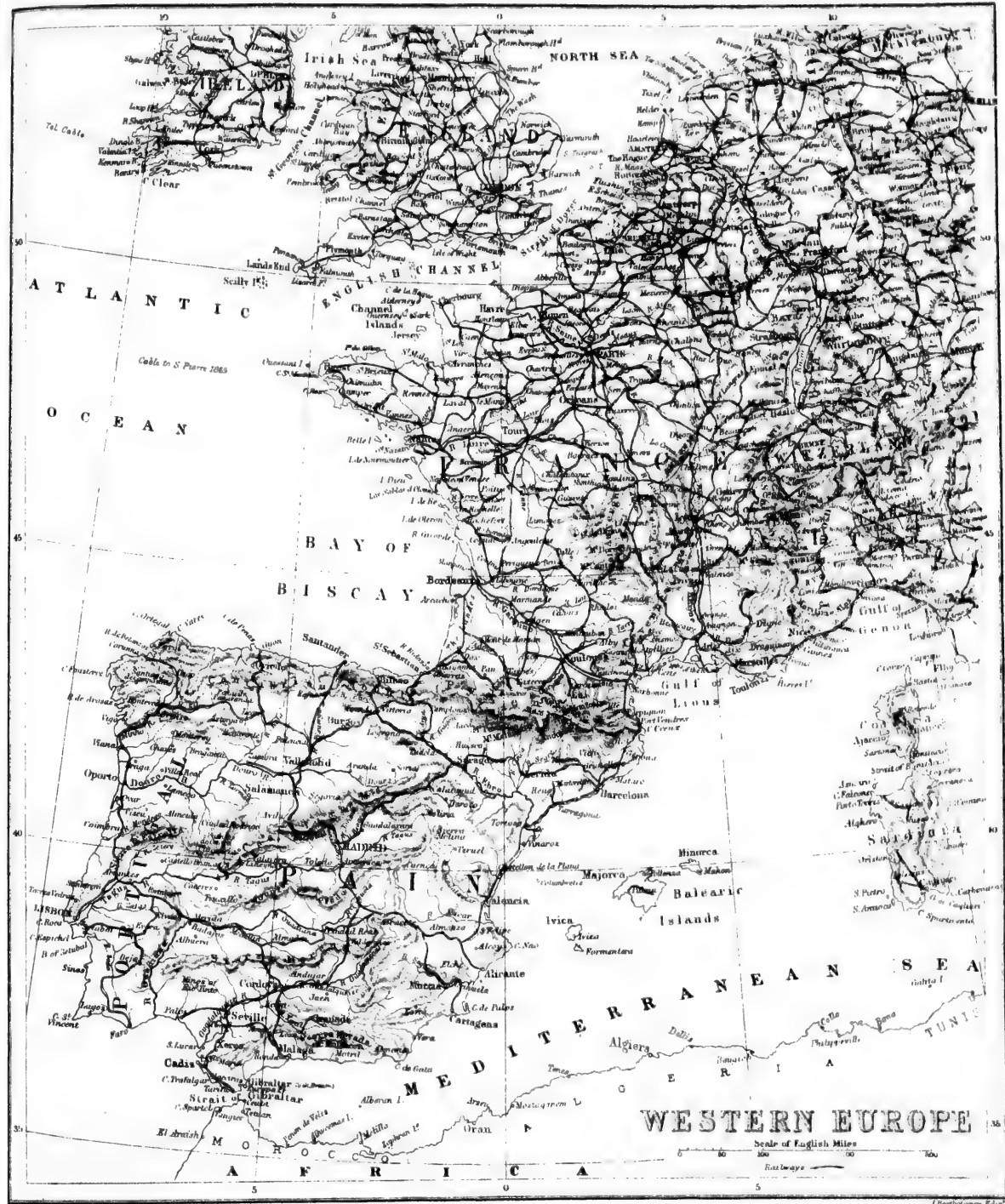
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France

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Mountains.—*In what part of the country are they? In what direction do they extend?*

Pyrenees? Alps? Vosges? Cevennes? Auvergne? Jura? **Cote d'or?** Cantabrian? Sierra Nevada? Sierra Morena? Sierra d'Estrella? Toledo?

Straits.—*Between what lands? What waters does it connect?*

Bonifacio? Gibraltar?

Rivers.—*Where does it rise? In what direction does it flow? Through what countries? Into what body of water?*

Loire? Garonne? Seine? Rhone? Rhine? Douro? Tagus? Guadiana? Guadalquivir? Ebro?

Lakes.—*Where situated?*

Constance? Geneva? Zurich? Lucerne?

Cities.—*In what part of the country? How situated?*

Paris? Rouen? Havre? Lille? Lyons? St. Etienne? Marseilles?

Toulon? Nantes? Bordeaux? Toulouse? Cherbourg? Brest? Geneva?

Basle? Zurich? Bern? Madrid? Barcelona? Cartagena? Valencia?

Malaga? Cadiz? Seville? Murcia?

Granada? Palma? Santa Cruz?

Oronto? Lisbon? Funchal? Angra?

FRANCE.

France, one of the six great powers of Europe, occupies the western part of central Europe. The Pyrenees Mountains separate it from the Iberian Peninsula (Spain and Portugal), which extends to the south-west.

In **Extent** it is about twice the area of Ontario, and contains a larger population than the British Islands.

The **Surface** comprises the Great Plain of France with the mountains of the Southern Highlands on the east and south. The soil is remarkably fertile and carefully cultivated. Agriculture is the chief **Industry** of the people.

The **Products** of the north-west part of the plain are the usual grains, roots and fruits of the North Temperate Zone, including the beet, which is largely grown for the manufacture of sugar. In the central and southern parts, under a warmer sky, tobacco and maize are cultivated; the vines produce their abundant clusters, from which the celebrated wines of France are made (Champagne, Burgundy, Bordeaux and others); the orange, the olive and the almond thrive, and the mulberry is largely cultivated for the food it furnishes the silk-worm.

The engraving shows a silk-worm on leaves of the mulberry-tree. About five weeks after it is hatched, the worm begins to weave around itself its cocoon, which is formed of a fine continuous thread about 1,000 yards long, and is designed to protect it while in the chrysalis state, before it emerges as a moth. The chrysalis having been killed, the threads from several cocoons are joined and carefully reeled off, forming "raw silk." After going through other processes, the raw silk is dyed and woven by different kinds of looms into various fabrics.

South of the Garonne are extensive plains called *Landes*, which, though unfit for cultivation, afford pasture grounds for immense numbers of sheep.

France possesses a large supply of valuable **Minerals**—coal, iron and lead—which greatly assist in promoting its manufactures.

The coal-mines near Belgium and in the Cevennes furnish an abundance of fuel for steam-power.

The **Manufactures** of France are extensive and important. For silks it is unrivalled. It is also celebrated for iron manufactures, for fine woollens, muslins, laces and other fabrics; and for porcelain, glassware, jewellery, clocks, bronzes, and other articles of taste and fashion. France produces more wine than any other country.

The **Commerce** of France is very extensive with all parts of the world, and ranks second only to that of Great Britain in value and in the number of vessels employed.

The internal commerce is facilitated by the navigable rivers, numerous railways, either the property of the State or to become so after a stated conceded time; and canals, of which 8,000 miles are in operation. The principal **Exports** are silks, woollens, and other woven fabrics, wines, haberdashery and articles of fashion; and the chief **Imports** are raw materials for manufacture, grain and foreign produce for consumption.

The **Government** is a Republic, and consists of a President, Chamber of Deputies and Senate.

The President is elected for seven years by the majority of votes of the members of the Chamber of Deputies and Senate united in a National Assembly. The Chamber of Deputies is elected by universal suffrage, and the Senate is partly elected by the people and partly by the National Assembly.

The **Educational System** is governmental, and is presided over by a Minister of Education. The expenses are partly defrayed by the State.

The established **Religion** is the Roman Catholic, but all others have full toleration, and Protestant clergymen are paid by the State.

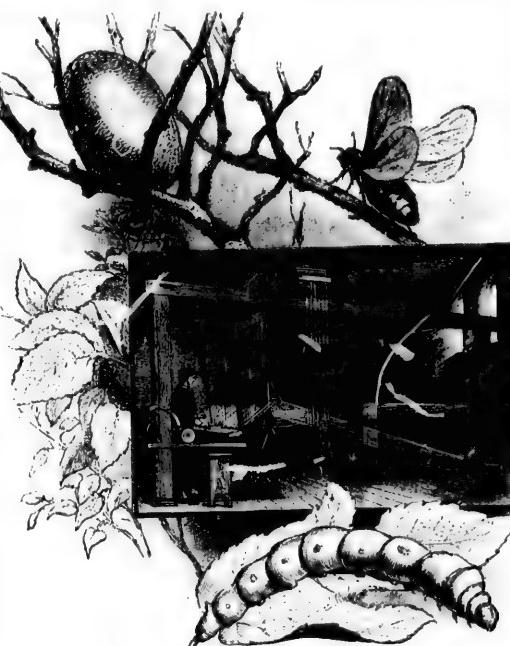
The **People** of France belong chiefly to the Graeco-Latin or Roman race; the Celtic family occupy Brittany and the northwest; and the Teutonic the north-east. They are nearly all Roman Catholics.

The country is divided into eighty-six Departments, including the island of Corsica.

The **Foreign Possessions** of France are extensive:—In Africa—**Algeria**, **Senegal** and its dependencies, settlements on the **Gold Coast** and **Gaboon**, **Reunion** or Bourbon, **Ste. Marie**, **Mayotta** and **Nossi-Be** off the coast of Madagascar; in America—the islands **St. Pierre** and **Miquelon**, **French Guiana** or Cayenne, and the islands of **Martinique**, **Guadalupe** and its dependencies, in the West Indies; in Asia—**Pondicherry**, and some small settlements in India, and **French Cochinchina**; in the Pacific Ocean—**New Caledonia** and its dependencies, **Tahiti** and its dependencies.

The French also claim a protectorate over **Cambodia** and **Tong-King**, in Asia; and over **Tunis** and the Island of **Madagascar**, in Africa.

Corsica is a large mountainous island off the west coast of Italy, celebrated as the birthplace of Napoleon. The soil is sterile, and the occupations of the people are agriculture and pasturage. It forms a Department of France. **Ajaccio** is the chief town.



SILK: THE WORM, MOTH, AND MANUFACTURE.

Paris, the capital, is the second city in Europe in size, wealth and commerce, but the first in splendor. It is the most beautiful and attractive of cities, and is the world's centre of modern art, fashion and pleasure. It is distinguished for its magnificent palaces, public buildings, promenades and places of amusement, as well as for the number and high character of its literary and scientific institutions. It is also noted for the manufacture and sale of articles of art, ornament and fashion. **Versailles** (*ver-sayls*), 10 miles from Paris is noted for its magnificent palace and gardens.

Lyons is the second city in France and is noted as the centre of the silk trade; **Lille** is the seat of the linen, cotton and woollen manufactures. **St. Etienne** is an important manufacturing city and the centre of the coal fields of France. The laces of **Valenciennes** and the cambrics of **Cambrai** are famous.

Marseilles (*mar-sayls*) is the most important shipping port and the centre for export of all the produce and manufactures of southern France; near it is **Toulon**, the most important naval port of France. **Bordeaux** is the largest city in the west and the great emporium of the wine known in this country as "claret." **Havre**, the port of Paris, at the mouth of the Seine, is the most important sea-port in the north, and has a large trade with America. **Rouen**, **Toulouse**, and **Nantes** on the Loire, are important commercial cities. **Brest** and **Cherbourg** are strongly fortified naval stations.

SWITZERLAND.

Switzerland is the only country of importance in Europe having no sea-port.

It is the most mountainous region of Europe, having the Alps with their snowy peaks and numerous glaciers, covering the greater part of the country, and a high plain with the Jura Mountains on the north-west. For scenery it is unsurpassed, with its picturesque and fertile valleys, its mountain torrents, its cascades and its crystal lakes, contrasting with the rugged grandeur of its mountain peaks and seas of ice.

In **Extent** it is less in size than Nova Scotia, but contains a population only one-third less than the Dominion.

The chief **Industries** of the people are, agriculture in the valleys, and pasturing in the mountains. **Manufactures** of clocks, watches, jewellery, carved-wood, and woven fabrics—silk, lace and cotton—are carried on.

The numerous rapid mountain streams afford cheap and abundant water-power.

Being an inland country, Switzerland has little **Commerce**, except with the neighboring countries, France and Germany.

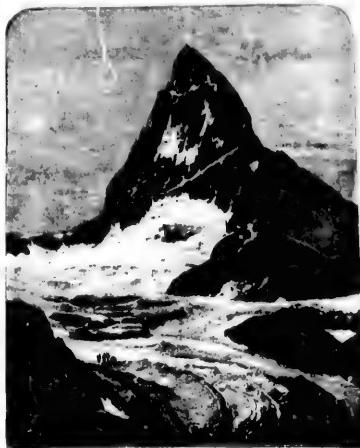
The **Exports** consist of the manufactures named above, and dairy produce and the **Imports**, of bread-stuffs and provisions.

The **Government** is a Federal Republic, composed of twenty-two cantons, or small states.

The Legislative power is vested in a Parliament, consisting of two Chambers, the Council of States (or Senate), and the National Council, both elective. These two combined form the Federal Assembly, which elects a Federal Council of seven members, in whose hands the executive power is vested.

The **Population** is formed of three different nationalities, distinct by their language—German, French and Italian; the first constituting the great majority. Three-fifths are Protestants, and the remainder Roman Catholics.

Berne is the capital. **Basle**, the largest city, has extensive ribbon and other manufactures. **Geneva** is the principal centre of trade, and is noted for its watches and jewellery, and for its picturesque situation at the outlet of Lake Geneva. **Zurich** has manufactures of cotton and silk goods, and is an educational centre.



THE MATTERHORN.

SPAIN.

Spain, with Portugal, occupies the western peninsula of Europe, or Iberian Peninsula as it is called. The people are of the same race, the Romanic, and speak kindred languages.

In **Extent**, Spain is a little larger than the Province of Quebec, but contains a population of upwards of 16,000,000. It has a coast-line of over 1,300 miles.

The **Surface** is an elevated table land nearly 2,000 feet above the sea, traversed and surrounded by mountain ranges rising to a height of from 7,000 to nearly 12,000 feet. Mulhacen in the Sierra Nevada is 11,657 feet. Mount Perdu in the Pyrenees is 10,994 feet, and the summits of many others are above the snow-line (here 8,000 feet). The soil is poorly cultivated but is generally fertile, well adapted to agriculture and to the growth of semi-tropical fruits—olives, oranges, lemons, almonds, figs and pomegranates.

The vine is grown in every part: in the south-west, Xeres, the well-known sherry, and in the south-east Malaga and Alicante wines are made. The chestnut is cultivated to a large extent, and from the nuts flour is made, which is used for food by the poorer classes. The cork-oak (an evergreen, the outer bark of which forms the cork of commerce), and esparto grass (from which paper is made), are important products; hemp and flax of the best quality are grown. The mules of Spain, the Andalusian horses and the Merino sheep great flocks of which are pastured on the table-lands, are famous.

Spain is rich in **Minerals**, especially iron, copper, quicksilver and lead, but the mines are not worked to any great extent.

The **Manufactures** of Spain are unimportant, the principal being silk.

The **Commerce** of Spain is chiefly with Great Britain and France. Compared with the extent of the country, and the position it occupies, Spain is far behind the other nations of Europe in maritime enterprise for which, in former times, it was greatly noted.

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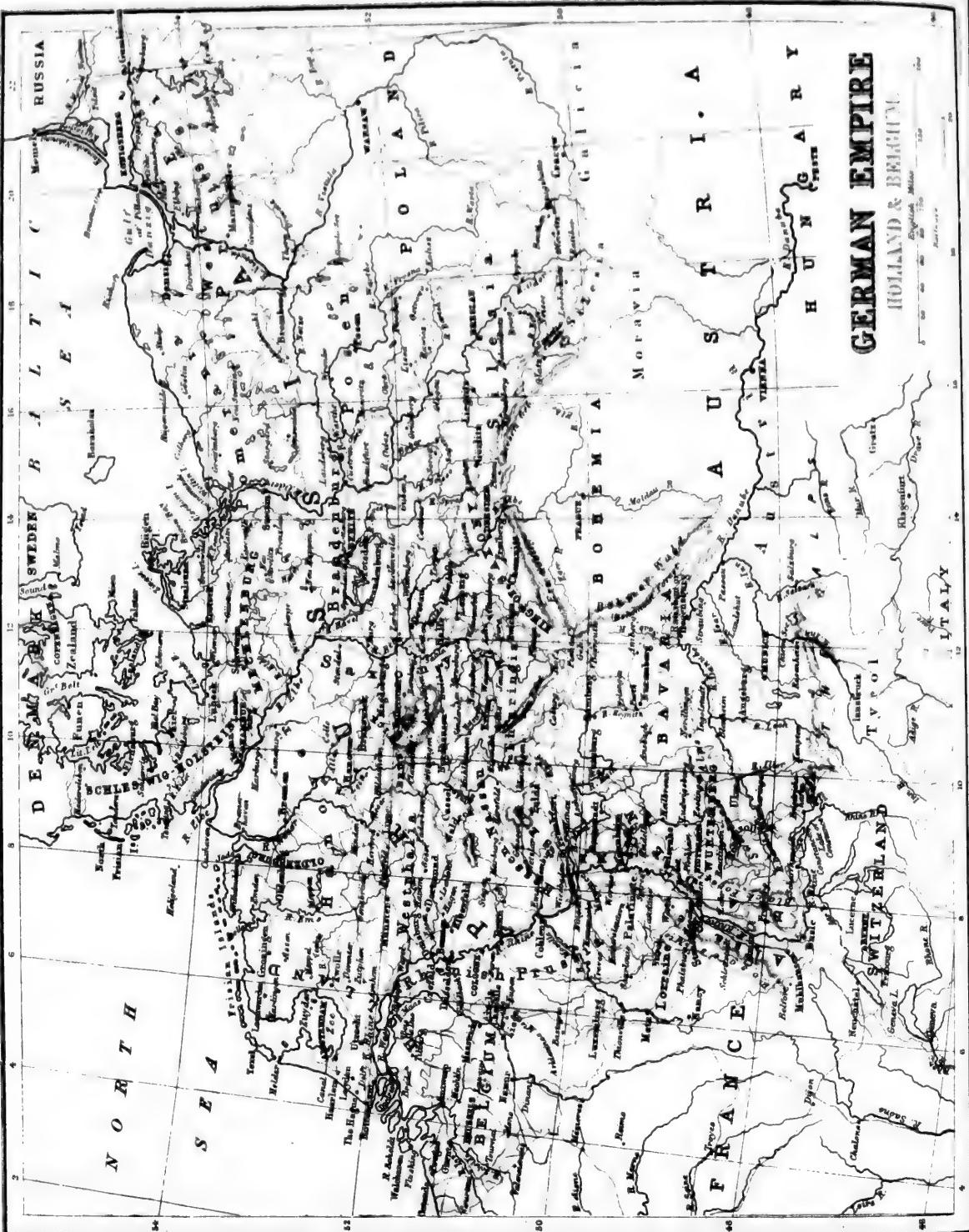
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GERMAN EMPIRE

MILLAND & BLAISTHAL





The want of good roads to facilitate internal commerce, and the unsettled state of the Government have contributed to this result. The rivers are not generally navigable to any distance, but the most important cities are connected by railways.

The **Exports** are chiefly wines, fruit, metals, wool and cork; the Imports, manufactured goods and foreign products.

The **Government** of Spain is a limited monarchy, and the legislative power is in the hands of the King and the *Cortes* (*cortes*), the latter consisting of two bodies, the Senate and the Chamber of Deputies. The State **Religion** is the Roman Catholic.

The **People** are generally of the Romanic race, but in the north-west, between the Cantabrian Mountains and the Biscay coast are the *Basques*, and in the south the *Moriscos*, descendants of the Moors of Granada; these both belong to the Celtic race.

Madrid is the capital and largest city, and is noted for its magnificent palace (the Escorial), and for its art collection. **Barcelona**, the second city in importance for population, is the first in wealth, commerce and manufactures (silks, woollens and cottons). **Valencia** is noted for its fruit and for its silk manufactures; **Seville** for its extensive tobacco manufactures and fruits; **Xeres** for its wine—sherry; and **Malaga** for its wine and grapes. **Cadiz** and **Cartagena** are naval fortified ports. **Granada** was the capital of the Moorish Kings, and contains the celebrated palace—the Alhambra. **Murcia**, **Saragossa** and **Toledo** are among the most celebrated ancient cities. **Salamanca** is noted for its university.

Gibraltar, at the entrance to the Mediterranean Sea, one of the strongest fortresses in the world, has belonged to Great Britain since 1704.

The **Insular Provinces** of Spain are the **Balearic Islands**, comprising Majorca, Minorca, Ibiza, Formentera and adjacent islands; and the **Canary Islands** in the Atlantic, off the west coast of Africa, of which Teneriffe, Grand Canary and Palma are the principal.

Palma in Majorca is the chief town of the Balearic Isles, and **Santa Cruz** in Teneriffe the chief town of the Canary Islands.

The **Foreign Possessions** of Spain are:—In the West Indies—the Islands

of **Cuba** and **Porto Rico**, in Oceania—the majority of the **Philippine Islands**, **Palau**, **Caroline** and the **Ladrones** Islands, in Africa—**Ceuta** and its dependencies, opposite Gibraltar, the islands of **Fernando Po** and **Anobon**, and the Territory of **San Juan** in the Gulf of Guinea.

The **Republic of Andorra** is situated in the Pyrenees Mountains, and is under the joint government of France and the Bishop of Urgel. It is very small and of no importance.

PORtUGAL.

Portugal occupies the south-western part of the Iberian Peninsula, and in physical features, climate, soil and people resembles Spain.

The **Extent** of the country is one-fourth greater than that of New Brunswick, but the population is nearly equal to that of the Dominion.

The chief **Industry** of the country is the cultivation of the grape, olive and semi-tropical fruits. The extensive forests of chestnut and cork-oak furnish valuable products, and the **Minerals**, of which manganese, antimony, lead, copper, iron and salt are the principal, are valuable.

The **Exports** are chiefly port wine, fruits, minerals and cork, and the imports, cereals and other articles of consumption.

The **Government** is a Constitutional Monarchy and is similar to that of Spain. The religion is Roman Catholic.

Lisbon, the capital, has a fine harbor, and is the principal commercial city. **Oporto** is the chief seat of the trade in *Port Wine*, to which it gives its name. The other towns are of minor importance.

The **Insular Possessions** of Portugal are:—the **Azores**, or Western Islands, in the Atlantic; the **Madeiras**, celebrated for their wine, off the west coast of Africa. **Angra** is the capital of the Azores, and **Funchal** of the Madeiras.

The **Foreign Possessions** of Portugal are:—In Africa—the **Cape Verde Islands**, off the western coast, settlements in Guinea (**Senegambia**, **Bissao**, etc.); the islands of **St. Thomas** and **Principe** in the Gulf of Guinea; **Angola** (districts of Loando, Benguela and Mossamedes) on the west coast; **Mozambique**, **Sofala**, etc., on the east coast. In Asia—**Goa** and other small settlements on the coast of India, **Macao**, near Canton, and **Timor** in Oceania.

QUESTIONS ON THE MAP.

German Empire.—What two seas are on the north of Germany? What kingdom? What two empires in the east? What empire and republic in the south? What three countries in the west? Which is the largest state of the German Empire? What states are in the south? What state is north of the Prussian Province of Brandenburg? What state is between Prussia and Bohemia? What province borders on France?

What five rivers, flowing northwards, cross Germany? Which are the two chief tributaries of the Rhine? What river flows east through southern Germany? What mountains separate Germany from Bohemia? What mountains are in the interior? What mountains south of Bavaria? What mountains in Baden? In Alsace? In Thuringia?

What city is the capital of Prussia? Of Bavaria? Of Saxony? Of Wurtemberg? Of Baden? What cities are on the Rhine? What city on the Main, near the Rhine? On the Danube? Near the mouth of the Weser? Near the mouth of the Elbe? North-east of Hamburg? Near the mouth of the Oder? Near the mouth of the Vistula? North-east of Dantzig? North of Koenigsberg? In Silesia on the Oder? What cities in Bavaria on the Main? What city south of Bamberg? What city in the north-west of Saxony? In Rhenish Prussia, west of Cologne? In Hanover, on the river Leine?

What islands are opposite the mouth of the Oder? What long bays (Haff) are on the Baltic coast? What islands off the west coast of Schleswig-Holstein? What bay off Oldenburg, on the North Sea?

Holland.—What country is east of Holland? South? What water on the north and west? What sea is in Holland? What islands are off the north coast? What river crosses the country? What tributary does it receive?

What city is on the Zuyder Zee? What city south of Amsterdam? What city is the capital? What city is near The Hague to the north-east? What city is at the mouth of the Rhine?

Belgium.—What country is east of Belgium? North? South? What water on the west? What two rivers flow through Belgium? What mountains are in the south-east? What city is the capital? What city is at the mouth of the Scheldt? What two cities are on the Maas? What two cities are in the western part of the country?

REVIEW EXERCISES.

States.—Where is it? How bounded? What is the chief town or city? Prussia? Bavaria? Saxony? Wurtemberg? Baden? Mecklenburg? Alsace-Lorraine?

Islands.—In what direction from the nearest land? By what water surrounded?

Rügen? Usedom? Wollen? North Frisian? Frisian?

Seas and Bays.—What country does it indent or wash? Of what body of water is it an arm?

Baltic? North? Dantzig? Kurische Haff? Frische Haff? Stettiner Haff? Jade (yah'-day)? Zuyder Zee?

Mountains.—In what part of the country are they? In what direction do they extend?

Riesen-Gebirge? Erz-Gebirge? Böhmer-Wald? Hartz? Thuringian Forest? Alps? Black Forest? Vosges? Ardennes?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what body of water?

Rhine? Elbe? Oder? Weser? Vistula? Danube? Main? Moselle? Maas? Scheldt?

Cities.—*In what part of the country? How situated?*

Berlin? Munich? Dresden? Stuttgart? Carlsruhe? Strasburg? Mannheim? Mayence? Coblenz? Bonn? Cologne? Düsseldorf? Frankfort? Katisbon? Ulm? Bremen? Hamburg? Lübeck? Stettin? Dantzig? Koenigsberg? Memel? Breslau? Bamberg? Wurtzburg? Nuremberg? Leipzig? Aix-la-Chapelle? Hanover? Amsterdam? Utrecht? The Hague? Leyden? Rotterdam? Brussels? Antwerp? Namur? Liège? Ghent? Bruges?

GERMAN EMPIRE.

The **German Empire** is a Confederation composed of twenty-six States (see Statistical Table) under the Presidentship of the King of Prussia, who bears the hereditary title of "German Emperor."

The largest of these States is the Kingdom of Prussia; the next in importance are the Kingdoms of Saxony, Bavaria, and Württemberg.

In Extent the empire is about the same size as France, but contains one-fifth more inhabitants.

The **Surface** of Germany is generally flat, forming part of the Great Eastern Plain, and is bordered on the south by the mountains of the Central Highland. The only mountains in the interior are the low ranges of the **Hartz Mountains** near the centre, and the **Black Forest** (Schwartz wald) in the south-west. The rivers are numerous and valuable for navigation. The **Soil** in the south and west is fertile, but a large part of the north-east consists of sandy steppes and barren heaths. The **Climate** is *mild* in the western or Rhenish districts; *moist* on the coast of the Baltic; and *cold* in the east. The principal **Products** are grain, flax, hemp, and beetroot for the manufacture of sugar; in the warmer southern valleys, the vine, maize and tobacco are cultivated. Cattle and sheep are also raised. The valley of the Rhine is famous for its wines.

The **Minerals** of Germany, though not extensively distributed, are valuable—iron, coal, copper and zinc. Amber is found on the coast of the Baltic.

The chief **Industry** of Germany is agriculture and raising cattle. Large quantities of agricultural products are exported.

Manufactures are extensive and varied; they consist largely of linen, cotton and woollen fabrics, and of leather, earthenware, glass, paper and tobacco manufactures.

For **Commerce**, Germany ranks third in the European States, Great Britain being first and France second.

The **Exports** are chiefly textile and felt fabrics, clothing, grain, cattle, provisions, leather, wine, beer, metal- and wood-work; and the **Imports**, foreign produce for consumption and raw materials for manufacture.

The **Government** of the German Empire is a limited monarchy and is in the hands of the Emperor and of the Federal Council (Bundesrath) composed of representatives from each of the States.

This Imperial power is restricted, in the exercise of certain functions, by the necessity of securing the assent of the Parliament (Reichstag) composed of representatives elected by the people. This Parliament has, in certain matters, the right of control. Each State is also a limited monarchy, excepting the three Free Cities, which are republics, and each has its own internal government. **Alsace-Lorraine** is an Imperial Territory, and is under the direct control of the Imperial Government.

The prevailing **Religion** is the Protestant, but rather more than one-third of the population are Roman Catholics. Germany is noted for its complete and comprehensive educational system. The Universities are also famous.

The **People** of the German Empire are of one nationality. The number of Germans in the surrounding countries (Austria, Switzerland, etc.), may be estimated at about 13,000,000, so that there is in Europe a total of 58,000,000 of German-speaking people.

Berlin, the capital of Prussia and of the German Empire, is a beautiful city, with extensive manufactures and commerce. **Hamburg**, the second city in importance, is the leading centre of commerce and shipping. **Breslau** is noted for its large trade and great wool fair.

Munich, the capital of Bavaria, is renowned for its splendid art-gallery and for its literary institutions; **Dresden**, the capital of Saxony, is celebrated for its art-gallery and for its china; **Leipzig** for its great fairs, attended by merchants from all parts of the world; **Cologne**, as the principal seat of commerce on the Rhine, and for its cathedral; **Frankfort**, as a great financial centre; **Koenigsberg**, **Dantzig**, **Bremen** and **Stettin**, as large and important shipping ports; **Magdeburg** and **Mayence** as two of the strongest fortresses in Europe; **Strasburg** for its cathedral; **Nuremberg** and **Chemnitz** for their manufactures.

Besides the above, Germany possesses many large cities important for their universities, their trade, or their manufactures.

STATES OF THE GERMAN EMPIRE.—STATISTICAL TABLE.

STATES.	AREA IN SQ. MILES.	POPULA- TION.	CAPITAL.
4 Kingdoms—			
<i>Prussia</i>	133,033	27,279,111	Berlin.
<i>Bavaria</i>	28,978	5,284,778	Munich.
<i>Saxony</i>	5,727	2,972,805	Dresden.
<i>Württemberg</i>	7,450	1,971,118	Stuttgart.
6 Grand-Duchies	18,721	3,830,973	
5 Duchies	4,507	1,138,786	
7 Principalities	2,150	515,657	
3 Free Cities—			
<i>Lübeck</i>		63,571	
<i>Bremen</i>	368	156,723	
<i>Hamburg</i>		453,869	
1 Imperial Territory—			
<i>Alsace-Lorraine</i>	5,742	1,566,670	Strasburg.
	206,476	45,234,061	



BERLIN: PLACE DES GENS D'ARMES.

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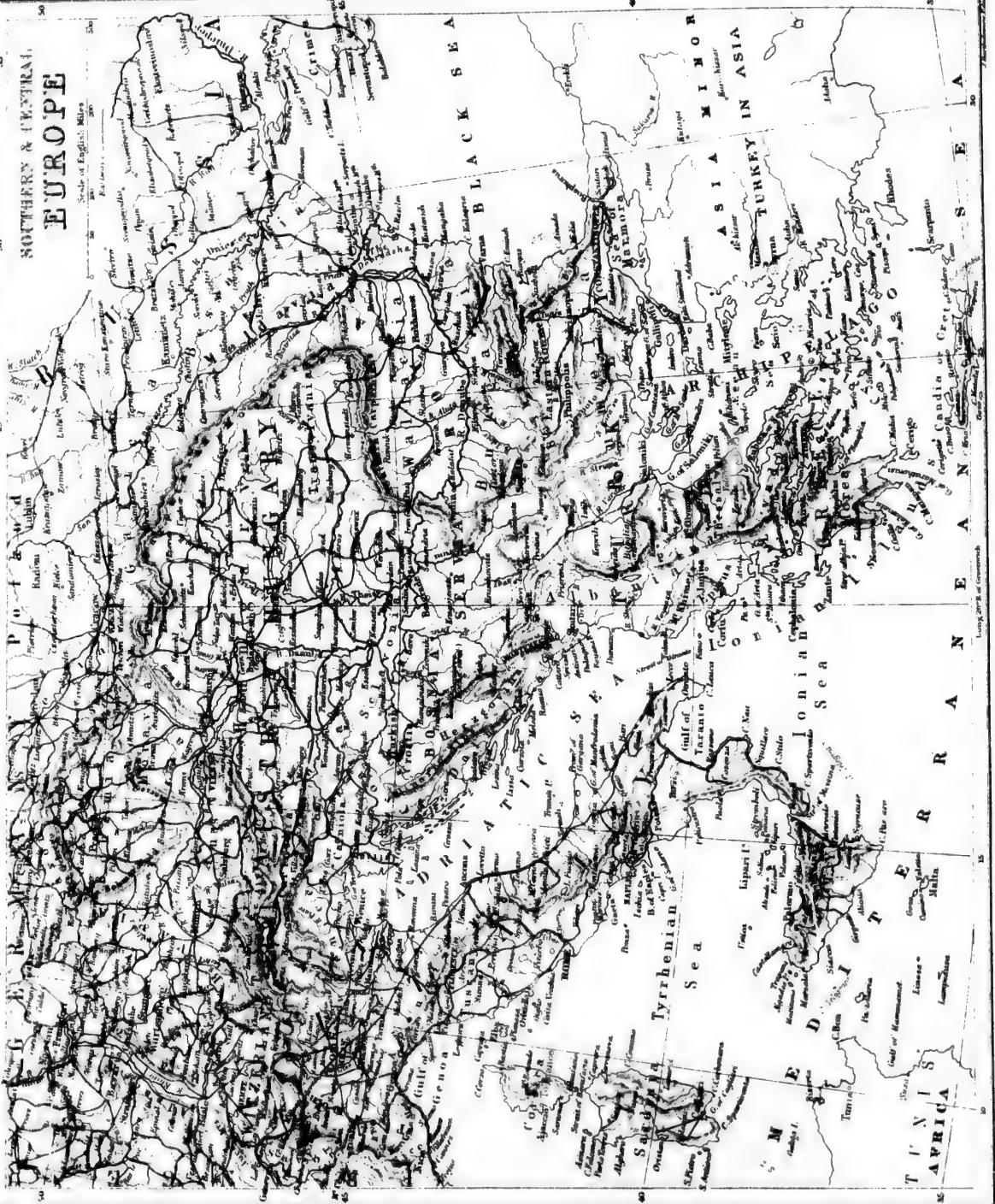
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STATICAL TABLE.

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2,805	Munich.
1,118	Dresden.
0,973	Stuttgart.
8,786	
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HOLLAND.

The Kingdom of Holland or The Netherlands occupies the lowest part of the Great Lowland Plain. It includes also the Grand-Duchy of Luxemburg.

In Extent it is less than half the size of New Brunswick, but has a population nearly equal to that of the whole Dominion.

The Surface is intersected by rivers and by numerous canals—in fact, a net-work of water-courses. Most of it is below the level of the sea, and was formerly overflowed by the sea at high-tide, but it is now protected by immense embankments called Dikes.

The Soil is fertile and is cultivated with great care, producing hemp, flax, madder (*a dye-stuff*) and root-crops in abundance. Holland is noted for its horses and cattle, and dairy produce forms a large part of its exports. The Climate is generally cold and moist, but healthy. There are no minerals, and peat is used instead of coal.

The streams have no water-power, but the Dutch make wind-mills perform all kinds of work. The canals which are frozen over in winter serve as highways for the people on their skates.

The principal Industries of the Dutch are agriculture and dairying, but some of their Manufactures have a high reputation—the fine linens of the north and the earthenware (*delf*) of the south are celebrated. Besides these are damasks, cotton, woolen and silk fabrics. The Dutch are also a maritime people.

The Commerce of Holland is extensive, from its position at the mouth of the Rhine, its harbors on the North Sea, its foreign possessions, and its facilities for internal communication by means of canals and rivers. Trade is chiefly carried on with Great Britain and Germany.

The Exports are chiefly refined sugar, flax, madder, cattle, and dairy products; the Imports, colonial produce, metals, and raw materials for manufacture.

The Government is a limited monarchy under a King, and a Parliament consisting of two Houses. The people belong principally to the Reformed Dutch (Protestant) Church, but about one-third are Roman Catholics. They are of the Teutonic race.

QUESTIONS ON THE MAP.

Italy.—What two countries are on the north of Italy? What mountains separate them from Italy? What country is on the north-west? What mountains separate France from Italy? What water is on the east? On the west? What islands to the south? How is Sicily separated from the mainland? What strait separates Italy from Turkey? What large islands are west of Italy? To whom do they belong? What smaller island is between Corsica and the mainland? What cape is at the south-eastern extremity of Italy? At the south-western? At the south of Sicily? What gulf is on the south-east? At the head of the Adriatic Sea? On the north-west coast? What mountains extend throughout Italy? What volcano is on the mainland? On Sicily? On the Lipari Islands? What lakes are in the northern part of Italy? What large river flows through northern Italy?

What city is the capital? On what river? What large city in the west is on the Po? What large city is between the Alps and Apennine mountains? What city is at the head of the Adriatic Sea? What city is south of Bologna? What three seaports are on the west coast? What three large cities are in Sicily? What port on the Adriatic Sea is east of Naples?

Austria-Hungary.—What two empires border on Austria-Hungary on the

The Foreign Possessions of Holland are considerable:—In the East Indies, Java, Celebes, and portions of Borneo, Sumatra and New Guinea, the Moluccas and several smaller islands; in South America, Surinam, or Dutch Guiana; and in the West Indies, Curacao and five other small islands.

The Hague is the seat of the Court. Amsterdam is the capital and chief commercial city; it is noted for its canals and for its diamond cutting. Rotterdam, the second city in size, has extensive commerce, and is noted for its distilled liquors. Utrecht and Leyden are important cities.

BELGIUM.

Belgium is the smallest of the European States (except Montenegro), and is the most densely populated.

The Extent of Belgium is little more than one-half that of Nova Scotia, but the population is one-fourth more than that of the whole Dominion.

The Surface of the north is flat. Like Holland, it is traversed by canals, and the coast is protected by Dunes, long hills of sand thrown up by the waves. In the south it is more hilly and is rich in minerals.

There is no country in the world in which agriculture has attained to a higher pitch of perfection, little more than one-eighth being uncultivated.

The chief Minerals are copper, zinc, lead, iron and coal, the two latter exceeding in richness those of any European country except Great Britain.

The chief Industries are agriculture, mining, and manufactures.

The principal Manufactures, which are also the chief Exports, are flax, wrought iron, linens, woollens, cottons, laces, cutlery and firearms. Besides these, agricultural and dairy produce are largely exported to Great Britain.

The Government is a limited monarchy under a King, Senate and House of Representatives. The people belong partly to the Teutonic race, and partly to the French or Romanic race.

Brussels, the capital, is a great centre of manufacturing industry, and is celebrated for its lace. Antwerp, with a fine harbor, is the principal centre of foreign commerce. Ghent is an important manufacturing city, noted for its gloves; Liege, for its extensive coal mines and iron-works; Bruges for manufactures; and Mechlin for lace.

north? What countries on the west? What States on the south-east? What water is on the south-west? What Kingdom occupies the centre of the country? What mountains are in the north-east? In the north-west? In the south-west? Near the eastern shore of the Adriatic Sea? What lake is in Hungary? What two Ian. cities are on the Danube? Which is the capital of Austria? Which of Hungary? What city is in the north-west (in Bohemia)? What city is south-east of Prague? What city is in the north-east (in Galicia)? What city in Galicia is on the Vistula? What Austrian sea-port is at the head of the Adriatic Sea?

What two protected states are south of Austria? What is the capital of Bosnia?

Roumania, Servia and Montenegro.—What two provinces constitute Roumania? How is it situated? What river partly separates it from Bulgaria? What river forms the north-eastern boundary? What sea is on the east? What city is the capital? What cities are on the Danube? What city in the north?

How is Servia situated? What is the capital? What name is given to the pass where the Danube breaks through the Carpathian mountains?

How is Montenegro situated? On what sea? What is the capital?



ST. PETER'S AT ROME.

Turkey.—What province is north-east of Turkey? (*Bulgaria*). What states are on the north of Turkey? What country on the south? What waters separate Turkey in Europe from Turkey in Asia? What waters are on the west? On the south? What mountains are in the north? In the west? What Turkish island is south of Greece? What city is the capital of Turkey? What port is on the Dardanelles? What port is in the south? What city is north-west of Constantinople? What is the capital of Bulgaria? What port has Bulgaria on the Black Sea?

Greece.—What country is north of Greece? What waters on the west and south? On the east? What island is north-east of the mainland? What peninsula is in the south? What gulf is north of the Morea? What group of islands is south-east of it? What group of islands is west of Greece? What cape forms the southernmost point of Greece? What city is the capital? What town is on the Gulf of Lepanto? What two ports are in the Ionian Islands? What one in the Cyclades?

REVIEW EXERCISES.

Islands.—In what direction from the nearest land? By what waters surrounded?

Sicily? Lipari? Malta? Sardinia? Corsica? Elba? Candia? Neopontra? Cyclades? Ionian?

Capes.—From what part of the country does it project? Into what water? Leuca? Spartivento? Passaro? Matapan?

Seas and Gulfs.—What coast does it indent or wash? Of what body of water is it an arm?

Adriatic? Tyrrhenian? Taranto? Venice? Trieste? Genoa? Black? Marmora? Saloniki? Aegean? Lepanto? Aigina?

Straits.—Between what lands? What waters does it connect? Messina? Otranto? Bosphorus? Dardanelles?

Peninsula.—From what country does it project? Into what water? Morea? Italy?

Mountains.—In what part of the country are they? In what direction do they extend?

Alps? Maritime Alps? Apennines? Vesuvius (v.)? Etna (v.)? Stromboli (v.)? Carpathian? Bohemian Forest? Erz-Gebirge? Noric Alps? Dinaric Alps? Iron Gates of Danube? Riesen-Gebirge? Balkan? Pindus?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what body of water?

Po? Tiber? Danube? Save? Drave? Theiss? Pruth?

Lakes.—Where situated?

Maggiore (*Mahrjor*)? Como? Garda? Balaton (or Platten See)?

Cities.—In what part of the country? How situated?

Rome? Turin? Milan? Bologna? Venice? Florence? Naples? Leghorn? Genoa? Palermo? Messina? Catania? Brindisi? Vienna? Budapest? Prague? Brunn? Lemberg? Cracow? Trieste? Bosna-Serai (*Serajevo*)? Cettenne? Bukharest? Galatz? Jassy? Belgrade? Constantinople? Gallipoli? Saloniki? Adrianople? Sophia? Varna? Athens? Patras? Corfu? Zante? Syra?

ITALY.

Italy forms the middle peninsula of Southern Europe, and includes the islands of **Sicily**, **Sardinia**, **Elba**, and about sixty small islands.

Italy is rather larger than Ontario in **Extent**, but contains fourteen times the population. The coast-line, including that of the islands, is 3,945 miles in length, far greater in proportion to its size than that of any other country.

The country is mountainous but beautiful and fertile—noted for its picturesque scenery. The **Climate** is delightful, and Italy is a great winter resort for invalids from more northern countries.

The heat of summer is in some places oppressive, and renders large tracts uninhabitable on account of *Malaria*, as in the Campagna di Roma, the Pontine Marshes, and the Tuscan Maremma.

In the north is the fertile valley of the Po, or Plain of Lombardy, between the Alps and Apennines, and south of that the **Surface** is a tableland, traversed by the Apennines throughout the length of the peninsula. The islands are generally mountainous.

The average elevation of the Northern and Southern Apennines varies from 3,000 to 5,000 feet; in the central part of the range several summits rise to the height of 7,000 to 8,000 feet, and Mt. Corno is 9,521 feet. Italy contains the only volcanoes in Europe, and is subject to earthquakes. **Mt. Vesuvius**

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in Naples, **Mt. Etna** in Sicily, and **Stromboli** (Lipari Islands), are volcanoes. In 1883 an earthquake destroyed the towns on the island of Ischia, near Naples, and many lives were lost.

The **Products** of Italy combine tropical fruits with the vegetation of the warm temperate regions.

The Plain of the Po contains the chief rice-fields of Europe, and Sicily produces abundance of wheat; the olive attains its perfection in Italy. More raw silk is produced than in any other country of Europe, most of it being exported to France.

Italy is not rich in **Minerals**, but iron, copper, lead, sulphur, stone, salt, coal and others are found; the marbles for statuary are famous.

The most famous marble quarries are those of Carrara, north-west of Lucca.

The principal **Industry** of the people is agriculture. **Manufactures** are chiefly confined to articles for home consumption, although the silks, artificial flowers, straw hats and musical instruments of Italy are much esteemed and are exported.

The **Fisheries**, notably of the sardine (so-called from Sardinia) and anchovy, are of considerable importance. Sponge and coral abound along the shores of the Mediterranean.

The **Commerce** of Italy is smaller than that of any of the other great powers of Europe, and is principally with France, Great Britain and Austria.

The **Exports** consist chiefly of silk, olive-oil, wine, fruits, fish, cattle, straw-hats, sulphur and marble; the **Imports**, of cotton, wool and other raw materials, grain, machinery, and manufactures of iron and cotton.

The **Government** is a limited monarchy, and the established **Religion**, Roman Catholic. The **People** are of the Romanic race, and are distinguished for their love of art—music, sculpture and painting.

Italy was formerly composed of independent states, but in 1870 became one united kingdom. The small republic of San Marino alone retains its independence.

Rome, the capital of Italy and formerly the capital of the world, is still a magnificent city. The splendor of its buildings and architectural ruins attest its former glory as the most noted city of antiquity. Rome is the art-centre of the world. It contains the palace of the Vatican, the residence of the Pope, the head of the Roman Catholic Church. St. Peter's Cathedral (*see engraving*) is the grandest ecclesiastical structure in the world.

Naples, the largest city of Italy, surpasses every city in Europe for the beauty of its situation and appearance. Among its varied manufactures are macaroni and vermicelli, which are made from flour and form the principal food of the people. **Turin** is famous for its silk manufactures; **Milan** is a large and important city, with a famous cathedral; **Florence**, called the "Magnificent," is distinguished as a seat of science and art, and for its collection of paintings and statues. **Genoa** and **Leghorn** are the most important sea-ports. **Venice**, built on a hundred small islands, is famous for its canals, which form the streets of the city. **Palermo**, **Messina** and **Catania** in Sicily have an extensive commerce. **Cagliari** is the principal town in Sardinia. **Brindisi** is the port of call for the mail steamships on the route between Great Britain and India. Besides these, there are many large and celebrated cities in Italy, as **Bologna**, **Padua**, **Ferrara** and others.

The **Republic of San Marino**, situated east of Florence, is a very small but ancient republic, and still maintains its independence. The whole extent is less than thirty-one square miles, and the population only amounts to 7,816.

The **Principality of Monaco** is situated near the frontier of France. It comprises only about eight square miles in extent, with a population of 7,049 inhabitants.

AUSTRIA-HUNGARY.

The **Austria-Hungarian Empire** is, next to Russia, the largest European state, and comprises the Austrian State and the Hungarian State, each having its own Parliament, ministry and administration under the same Sovereign, who is Emperor of Austria and King of Hungary and Bohemia.

The Turkish Provinces of **Bosnia** and **Herzegovina** are also under the control of Austria.

In **Extent**, it is not so large as the united Provinces of Ontario and Quebec, but contains more than eleven times their population, or about the same as France.

The **Surface** is in general mountainous, except in the Hungarian Plain (*see Physical Map of Europe*), and the **Climate** is mild and healthy.



BUDA-PESTH: CAPITAL OF HUNGARY.

The **Soil** is fertile, producing grain of all kinds, beet-root, flax, and wines, but is for the most part poorly cultivated. As a wine-producing country, Austria-Hungary is second only to France.

Austria is especially rich in **Minerals**—gold and silver in Transylvania and Hungary; iron in Carinthia and Styria; copper, iron and lead in Galicia; quicksilver in Carniola; and the celebrated salt mines near Cracow.

The principal **Industries** are agriculture and mining. **Manufactures** are confined almost entirely to the western part of the country, and consist chiefly in beer-brewing, cotton-spinning and weaving; glass-ware (in Bohemia); metal and leather-work.

Commerce, owing to the small extent of sea-coast, is necessarily limited, and is chiefly carried on through Germany.

The **Danube**, navigable for 800 miles within the limits of the monarchy, is an important highway for trade.

The chief **Exports** are wine, wheat, fruits, and manufactures of leather, metal, glass, wood and earthenware; and the chief **Imports** are colonial produce, tobacco, chemicals and textile fabrics.

The **Inhabitants** consist of people of different descent, language and sympathies; in the west, the Teutonic element prevails; in the east and south, the Slavonic; while the Hungarians or Magyars (*Magyars*) belong to the Mongolian race. The prevailing **Religion** is the Roman Catholic. No less than ten distinct languages are spoken by the various nationalities, besides many different dialects.

Vienna, the capital of the entire monarchy and the residence of the Emperor, is the fourth city in Europe for population, and is the chief seat of commerce and manufacture in Austria; it is connected by railways with every part of the empire. **Buda-Pesth**, the capital of Hungary, ranks next in importance; these form two cities, but are merely separated by the Danube. **Prague** is the chief city in Bohemia; **Brunn** has extensive woollen and other manufactures. **Trieste** is the chief sea-port. **Lemberg** in Galicia is an important city. **Cracow** was formerly the ecclesiastical capital of Poland and is celebrated for its salt mines.

Bosnia and **Herzegovina** are Turkish provinces, but by the treaty of 1878 are occupied by Austrian troops and are under the administration of Austria.

The country is mountainous and contains valuable minerals—iron, coal, copper, silver, quicksilver, lead and sulphur. Grain, fruit and cattle are raised and exported. The industries are unimportant. **Bosn-Serai** (*Sarajevo*) is the capital.

The small Principality of **Liechtenstein**, situated between Switzerland and the Tyrol, is independent, but belongs to the Customs-Union. It is only about 60 square miles in extent, and has a population of 9,124. **Vaduz** is the capital.

GREECE.

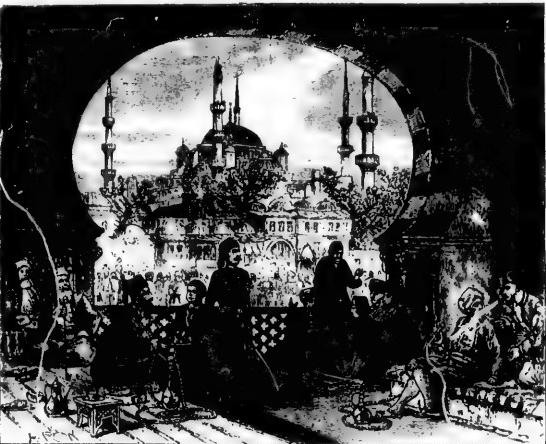
Greece comprises most of the eastern peninsula of southern Europe, together with the **Ionian Islands** on the west, and **Negropont**, the **Cyclades**, and numerous other islands in the Archipelago on the east.

The **Coast** is deeply indented by the Gulf of Corinth or Lepanto on the west and the Gulf of Ægina on the east, making almost an island of southern Greece—the **Morea** (ancient *Peloponnesus*).

In **Extent**, Greece is nearly as large as New Brunswick, and contains about the same population as Ontario.

The **Surface** is mountainous, and the coast is elevated, irregular and deeply indented. Vegetation is varied, but agriculture is generally in a very backward state. The most important **Products** are fruits—the olive, vine, orange, lemon, fig and currant-grape (from which dried currants are prepared). A large part of the population is engaged in raising sheep and goats in the mountain districts.

The country is rich in **Minerals**, but they are generally undeveloped; the principal, which is worked, is lead.



CONSTANTINOPLE: MOSQUE OF ST. SOPHIA.

Manufactures are few and unimportant. The **Commerce** of Greece itself is comparatively small, and is chiefly with Great Britain; but Greek merchants and seamen conduct the greater part of the commerce of the Black Sea, and of the **Levant**, or eastern part of the Mediterranean. The numerous islands of Greece form an excellent training-school for seamen.

The **Exports** are chiefly currants, olive-oil, lead, figs, and skins of sheep and goats; the **Imports**, cereals and manufactured goods.

The **Government** is a limited monarchy, and the legislative power is vested in a single Chamber of Deputies. The national **Religion** is the Greek Church. The people belong to the Græco-Roman or Romanic race.

Greece was formerly under Turkish rule, but gained its independence in 1832. Centuries of servitude and bad government have reduced Greece from its ancient supremacy, as the leading country in civilization, literature and art, to the lowest rank among the states of Europe. There are only seven miles of railway (from Athens to the Piræus) in the whole kingdom, and the internal development of the country is entirely neglected.

Athens, the capital and largest city, is noted chiefly for its ancient splendor and preeminence in art and literature. It still contains many relics of its former magnificence; its sea-port is **The Piræus**. **Patras** is the principal shipping port on the mainland; **Syracuse** (*Hermopolis*), on an island of the same name, is the principal commercial town and the chief station for the lines of steamships navigating the Levant. **Corfu**, the capital, and **Zante**, in the Ionian Islands, are places of considerable trade.

The **Ionian Islands**, formerly a republic under the British Crown, were voluntarily relinquished to Greece in 1864.

TURKEY.

The **Turkish or Ottoman Empire**, as it is also called, includes Turkey in Europe, Turkey in Asia, and tributary countries (Egypt and Tripoli), occupying part of north-eastern Africa.

Turkey in Europe, formerly very extensive, is now greatly reduced, and, including the Principality of Bulgaria, is only equal to the Province of Ontario in **Extent**, but has four times the population. Turkey in Asia greatly exceeds it in area and population.

A great part of the **Surface** is mountainous, but diversified—rich and beautiful valleys and fertile plains. The rivers, of which the Danube and its tributaries are the principal, are numerous, but are not available for navigation.

The **Soil** is for the most part fertile, but agriculture is greatly neglected. The **Cultivated Products** are cotton, maize, rice and other grains; the **Natural Products**, valuable timber-

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woods; and in the south, semi-tropical fruits. Cattle and sheep are largely reared in the mountainous districts.

The Minerals are—iron in abundance, lead, copper, sulphur, salt and coal, but they are not worked to advantage. The Manufactures are small and almost entirely domestic.

The only Exports are silks, carpets, tobacco, fruits, and the costly attar or oil of roses from the famous rose-gardens in the valley of the Maritsa. Manufactures and commerce are chiefly in the hands of Greeks, Armenians, and Jews.

The Government of Turkey is a despotism under a monarch, who is called the Sultan.

In 1877 the Sultan issued a decree with the view of forming a Legislative Assembly composed of two Houses, but the law is at present in abeyance. The provinces are ruled by pashas, and the whole country has suffered severely from bad government and from the rapacity of the rulers.

The Province of Eastern Roumelia, although under the direct sovereignty of the Sultan, has its own government and administration. The Principality of Bulgaria is also under the sovereignty of the Sultan, but has its own government, and the legislative power is in the hands of a Chamber of Deputies and a hereditary Prince.

The Inhabitants belong to three races—the Slavonic in Bulgaria and the north-west; the Mongolian (Turks) in the centre; and the Romanic (Greeks) in the south. The Turks are the ruling class and are Mohammedans. The others belong chiefly to the Greek Church.

Constantinople, the capital of the Ottoman Empire and resi-

dence of the Sultan is beautifully situated on the Bosphorus, and has one of the finest harbors in the world. It contains many splendid and graceful-looking mosques (or churches) and other buildings, which give it a magnificent appearance from without, but the streets are narrow and dirty, and the houses low and badly built. Adrianople is the chief seat of the silk, cotton and woollen manufactures, and is noted for its attar of roses. Saloniki is the second city in size, and is the principal sea-port.

The island of Candia, the ancient Crete, in the Mediterranean, south of the Archipelago, belongs to Turkey.

ROUMANIA, SERVIA AND MONTENEGRO.

Roumania, Servia and Montenegro, formerly tributary to Turkey, became independent in 1878, after the Russo-Turkish war.

In Extent, they are together one-third less than Ontario, but contain more than three times the population.

The Surface in the west—Montenegro and part of Servia—is mountainous and is covered with forests, but the east comprises the fertile Wallachian Plain, where wheat, tobacco, wine and fruits are produced in great abundance. In the mountainous part of the country, cattle, horses, sheep, goats and swine are raised in large numbers.

(For Continuation—see next page.)

EUROPE—STATISTICAL REFERENCE TABLE.

STATE.	AREA IN SQUARE MILES.	POPULA- TION.	PERSONS TO A SQUARE MILE.	CAPITAL.	POPULA- TION.	PRINCIPAL EXPORTS
Russia.....	2,056,838	83,650,351	41	St. Petersburg.....	876,575	Grain, flax-seed, hides, hemp, flax, tallow and wool.
Finland.....	120,000	1,806,900	14	Christiania.....	76,806	Fish and timber.
Norway.....	124,312	4,565,668	36	Stockholm.....	176,745	Grain, iron and copper.
Sweden.....	172,110	4,052,608	23	Copenhagen.....	234,850	Cattle, grain, and dairy products.
Denmark.....	14,631	2,052,608	140	London.....	3,814,571	Coal, iron, tin, salt; manufactures of iron, wool, cotton, earthenware, etc.
Faroes and Iceland.....	40,537	1,120	28	Edinburgh.....	289,358	Machinery, iron ships; manufactures of iron, cotton and wool.
Great Britain—				Dublin.....	338,579	Agricultural products, linen, copper and lead ore.
England and Wales.....	58,320	25,968,286	445	Paris.....	2,269,023	Silks, woollens, and other woven fabrics; wines and articles of fashion.
Scotland.....	30,463	3,735,573	122	Berne.....	44,087	Clocks, watches, jewellery; lace and other woven fabrics; dairy products.
Ireland.....	32,531	5,736,214	176	Madrid.....	397,690	Wines, fruit, metals, wool and cork.
European Possessions.....	126	175,186	1	Lisbon.....	246,343	Port wine and fruits.
France.....	201,915	37,672,048	186	Berlin.....	1,222,330	Textiles, felt, grain, cattle, provisions, leather; metal and wood-work.
Switzerland.....	15,811	2,846,102	180	Amsterdam (Com'l). (The Hague (Polit')).	328,047 123,499	Refined sugar, flax, madder, cattle and dairy products.
Spain.....	194,275	16,629,084	86	Brussels.....	162,498	Flax, wrought iron, linen, woollen and cotton goods; lace, cutlery and fire-arms.
Andorra and Canaries.....				Rome.....	272,010	Silks, olive-oil, fruit, cattle, sulphur and marble.
Portugal.....	35,460	4,330,690	128	Vienna.....	1,103,857	(Wine, grain, fruits; manufactures of leather, metal, glass and earthenware.
Azores and Madeira.....				Athens.....	66,374	Currants, olive-oil, figs, lead, and skins of sheep and goats.
Germany.....	206,476	45,234,061	219	Constantinople.....	700,000	Silks, carpets, attar of roses, tobacco.
Holland.....	13,594	4,323,647	318	Bukharest.....	221,000	
Luxemburg.....				Belgrade.....	26,651	
Belgium.....	11,251	5,519,844	490	Cettenje.....	2,000	Grain, cattle and skins.
Italy.....	113,237	28,474,316	251			
San Marino and Monaco.....						
Austria-Hungary.....	238,874	{ 37,860,054 9,124	158			
Liechtenstein.....						
Greece.....	24,711	1,979,423	80			
Turkey.....	124,676	8,631,400	69			
Bulgaria.....						
Roumania.....	49,640	5,376,000	108			
Servia.....	18,561	1,700,211	91			
Montenegro.....	3,450	236,000	68			
TOTAL.....	3,783,808	328,751,789	87			

The **Commerce** of the country is chiefly by way of the Danube. The **Exports** are grain, cattle and skins, most of which go to Austria and Great Britain.

The **Governments** of Roumania and Servia are limited hereditary Kingdoms, and the legislative power is vested in elective parliaments; that of Montenegro, the smallest state, is an abso-

lute hereditary monarchy under a Prince. The **People** belong chiefly to the Slavonic race, and the Greek is the national Church.

Bukharest, the capital of Roumania, carries on a considerable trade in grain, timber and wool. **Galatz** and **Jassy** are important cities. **Belgrade**, a strongly fortified city, is the capital of Servia. **Cettenje** (*Cet-t'en-yay*) is the capital of Montenegro,

CHIEF CITIES AND TOWNS OF EUROPE—REFERENCE TABLE.

CITY OR TOWN.	COUNTRY.	POPULATION.	NOTABLE FEATURES.	CITY OR TOWN.	COUNTRY.	POPULATION.	NOTABLE FEATURES.
London	England ...	3,814,571	Capital. Largest, most populous, and wealthiest city in the world.	Munich	Germany ...	230,023	(Capital of Bavaria. -Noted for its art-gallery and literary institutions.
Paris	France ...	2,269,023	Most beautiful city of Europe. Noted for manufactures of articles of art and fashion.	Turin	Italy	226,307	Silk manufactures.
Berlin	Germany ...	1,122,330	Capital of the Empire.—Manufacturing and commercial centre.	Bordeaux	France....	221,305	Exports "Claret" wine (Capital of Saxony.—Noted for its art-gallery and manufacture of china.
Vienna	Austria	1,103,857	Capital of the Empire.—Chief seat of manufactures and commerce.—Noted for the magnificence of its public buildings.	Dresden	Germany ..	220,808	Capital.—Exports grain, timber and wool.
St. Petersburg	Russia	876,575	Capital, and greatest commercial centre.—Or the Neva.—Founded by Peter the Great.	Bukharest	Roumania..	221,000	Centre of silk-trade.—Celebrated for its cathedral.
Constantinople	Turkey	700,000	Capital of the Ottoman Empire (Ancient capital.—Centre of inland trade.	Milan	Italy.....	214,004	Centre of coal trade.
Moscow	Russia	611,974	Important sea-port.—Famous for its docks.	Newcastle	England ... { Gateshead	211,101	(Important sea-port.—Trade with America.
Liverpool	England ...	552,425	Centre of cotton manufactures.	Bristol	do	206,503	Important shipping port.
Manchester	do ...	517,741	Important sea-port.—Centre of iron ship-building.	Palermo	Sicily	205,712	(Principal sea-port on the Black Sea and most important wheat market.
Glasgow	Scotland ..	511,532	Largest city, and commercial centre.—Celebrated for its picturesque situation and manufactures of macaroni and vermicelli.	Odessa	Russia	193,513	Manufactures of woollens.
Naples	Italy	465,172	Celebrated for metallic manufactures.	Bradford	England ...	183,032	Centre of linen, cotton and woolen manufactures.
Birmingham	England ...	400,757	Capital.—Noted for its palace "The Escorial," and its art collection.	Lille	France	178,144	Capital.—Famous arsenal.
Madrid	Spain	397,690	Capital.—Noted for lace manufactures.	Stockholm	Sweden	176,745	Centre of linen manufactures.
Brussels	Belgium ...	394,940	Centre of the silk manufacture.	Belfast	Ireland	174,394	(Important sea-port.—Centre of foreign commerce.
Lyon	France	376,313	Centre of the silk manufacture.	Antwerp	Belgium ...	169,112	Sea-port.—Exports grain, hemp, and flax.
Buda-Pesth	Hungary ...	360,551	(Largest sea-port.—Centre for produce of southern France.	Riga	Russia	168,844	Chief city of Bohemia.
Marseilles	France	360,099	Chief city of the Russian Province of Poland.	Prague	Austria	162,323	(Commercial city.—Noted for distilled liquor.
Warsaw	Russia	339,341	Capital and residence of the Viceroy.	Rotterdam	Holland	157,270	Sea-port.—Trade with northern European ports.
Dublin	Ireland	338,579	Commercial metropolis, with large East Indian trade. Famous for diamond-cutting.	Hull	England ...	154,250	Centre of potteries.
Amsterdam	Holland ...	328,047	Centre of woollen manufactures.	Stoke-upon-Trent	do	152,081	Noted for its great fairs.
Leeds	England ...	309,126	(Centre of commerce and shipping for the German Empire.	Leipzig	Germany	149,081	The only important sea-port.
Hamburg	Germany ..	289,859	(Capital.—Seat of science and literature.	Trieste	Austria	144,844	(Famous cathedral.—Principal seat of commerce on the Rhine.
Edinburgh	Scotland ... { Leith	289,358	Noted for cutlery and hardware.	Cologne	Germany ..	144,772	Noted for silk manufactures and fruit.
Sheffield	England ...	284,410	Important wool market and manufacturing city.	Valencia	Spain	143,856	Former capital of the Kingdom of Hanover.
Breslau	Germany ..	272,912	Capital.—Residence of the Pope.	Hanover	Germany ..	142,664	Manufactures of sail-cloth. —Sea-port.
Rome	Italy	272,010	Most important city for wealth, commerce and manufactures.	Dundee	Scotland ...	142,454	Important shipping port for grain, flux, etc.
Barcelona	Spain	249,106	Capital and principal seat of commerce.	Koenigsberg	Germany ..	140,900	Commercial city.
Lisbon	Portugal ...	246,313	Capital and chief naval station.	Toulouse	France	140,380	(Most important shipping-port of northern Italy.
Copenhagen	Denmark	234,850		Genoa	Italy	138,081	Great financial centre of Germany.
				Frankfort (on the Main)	Germany ..	136,819	Tobacco manufactures and fruits.
				Seville	Spain	133,938	Manufacturing city.—Noted for gloves.
				Ghent	Belgium	131,431	Ancient city.—Famous for its canals and former wealth and splendor.
				Venice	Italy	129,276	An important city on the Dnieper.
				Kherson	Russia	127,079	Naval depot and arsenal.
				Portsmouth	England ...	127,953	(One of the oldest cities in the Empire.
				Kiev	Russia	127,551	Commercial city.
				Nantes	France ... { St. Etienne	124,319	Centre of coal and iron trade.
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CHIEF CITIES AND TOWNS OF EUROPE.—REFERENCE TABLE.—*Continued.*

CITY OR TOWN.	COUNTRY.	POPULATION.	NOTABLE FEATURES.	CITY OR TOWN.	COUNTRY.	POPULATION.	NOTABLE FEATURES.
The Hague.....	Holland	123,499	Seat of the Court.—Distinguished for its art-galleries and museums. Coal-mines and iron-works.—Manufactures of fire-arms and machinery.	Aix-la-Chapelle	Germany	85,551	Noted for its baths and for two important treaties of peace concluded there.
Liege.....	Belgium	123,131	Manufactures of hosiery.	Brunn	Austria	82,660	Woollen manufactures.
Leicester.....	England	122,351	Seat of science and art.—Collection of paintings and statues.	Cardiff	Wales	82,373	Sea-port of Merthyr-Tydvil.—Coal and iron exports.
Florence	Italy	122,039	Capital of Wurtemberg.—Contains valuable art collections and libraries.	Saloniki	Turkey	80,000	Principal sea port.—Manufactures leather.
Stuttgart	Germany	117,303	Centre of coal trade.	Galatz	Roumania	80,000	Centre of grain trade.
Sunderland	England	116,262	(Wine and grapes.—Iron founders.	Cork	Ireland	78,642	(An important sea port.—The harbor is called "Queenstown."
Malaga	Spain	115,882	Important shipping port.	Gottenburg	Sweden	78,313	Terminus of an inland water-route, by Lake Wenner to Stockholm.—Important commercially.
Bremen	Germany	114,423	(Large trade in wheat, linseed, and tallow.	Christiania	Norway	76,866	Capital.—Exports timber and fish.
Kichinev	Russia	112,137	Manufactures of hosiery and laces.	Messina	Sicily	76,982	Exports fruit and grain.
Nottingham	England	111,631	Cotton manufactures.	Zurich	Switzerland	75,976	(Manufactures of cotton and silk.—Educational centre.
Oldham	do	111,343	The capital of Galicia and centre of trade in Austria-Poland.	Utrecht	Holland	71,337	An important interior commercial centre.
Lemberg	Austria	109,726	Important shipping port.—Grain, and farm produce.	Geneva	Switzerland	68,320	Picturesque situation.—Manufactures of watches and jewellery.
Danzig	Germany	108,551	Fashionable watering place.	Cracow	Austria	66,005	Former ecclesiastical capital of Poland.—Celebrated for its salt mines.
Brighton	England	107,528	An important commercial city on the Seine, with cotton manufactures.	Cadiz	Spain	65,028	Fortified naval port.
Rouen	France	105,906	The sea-port of Paris, with large American trade.	Swansea	Wales	63,739	Smelting copper ores.
Havre	do	105,867	Centre of the "Port" wine trade.	Athens	Greece	63,374	Capital.—Noted for its ancient splendor.
Oporto	Portugal	105,838	Important cotton manufactures.	Adrianople	Turkey	62,000	Centre of silk, carpet, and other manufactures.—Noted for the altar of roses.
Bolton	England	105,422	Principal city in the north of Scotland.	Basle	Switzerland	61,399	Ribbon and silk manufacturers.
Aberdeen	Scotland	105,054	Capital of Alsace-Lorraine.—One of the strongest fortresses in Europe.—Noted for its cathedral.	Astrakhan	Russia	57,704	Caravan trade.—Centre of maritime commerce of the Caspian Sea.
Strasburg	Germany	104,471	Cotton manufactures.	Merthyr-Tydvil	Wales	48,857	Coal and iron works.
Blackburn	England	104,012	Important commercial city.—Contains the oldest university in Italy.	Cronstadt	Russia	48,276	Sea-port of St. Petersburg.—Naval station.
Bologna	Italy	103,998	Centre of wheat region.	Taganrog	do	48,106	Exports wheat.
Kharkov	Russia	101,175	Manufacturing city.	Berne	Switzerland	44,087	Capital.
Nuremberg	Germany	99,519	Important shipping-port.	Nijni-Novgorod	Russia	42,441	Celebrated annual fairs.
Catania	Sicily	97,355	Manufacturing city.	Belgrade	Serbia	26,970	Capital.—A strongly fortified city.
Chemnitz	Germany	95,123	An ancient city of Spain.	Funchal	Madeira	19,752	Capital.
Murcia	Spain	91,805	Centre of trade in Moldavia, between Turkey, Austria and Russia.	Angra	Azores	11,070	do
Jassy	Roumania	90,000		Cettenne	Montenegro	2,000	do

GENERAL QUESTIONS.

Commercial.—Which is the most populous country of Europe? Which five rank next? Which four are nearly equal in extent, next to Russia? Which countries contain a population about equal to the Dominion of Canada? Which less? What country contains the largest city? What three other cities contain over 1,000,000 inhabitants? What are most of the countries of Europe noted for? (*Their extensive coast-line.*) Which has the greatest extent of coast-line? What republic has no coast-line? What small kingdom? What large empire has a very small coast-line? What country is noted for its fisheries? What countries for fairs? For the production of raw silk? For silk manufactures? For flax and hemp? For wheat? From what countries do we import cotton and woollen goods? Lace? Silks and ribbons? Linens? Statuary marble? Cork? Port wine? Sherry wine? Claret wine? Olive-oil? Currants and dried fruits? Altar of Roses? What countries produce coal? Iron? Tin? Salt? Copper? Lead? Earthware? What country builds iron-ships? Which are the chief ports of Great Britain on the east? On the west? In Ireland? Which are the chief ports on the Baltic Sea? On the Mediterranean? On the Adriatic? On the Black Sea? For what is London famous? (*As the centre of the world's commerce.*)

Voyages and Travels.—What cargoes are usually carried from Montreal

to Liverpool? (*Wheat and cattle.*) From Quebec to Glasgow? (*Timber.*) Through what waters and past what countries would a vessel sail in going from St. Petersburg to Genoa? From Leghorn to Trieste? From Venice to Constantinople? What cargo would be carried from Greece to Montreal? From Marseilles? From Bordeaux? From Hamburg? What cargo would a vessel carry from Odessa to Liverpool? From Patras? From Malaga? From Oporto? From Christiania to Hull? On what river would a steamer go from Basle to Rotterdam? From Lyons to Marseilles? From Warsaw to Danzig? From Nijni-Novgorod to Astrakhan? From Vienna to the Black Sea? From Paris to Havre? What cities would a steamer pass on the Rhine? On the Rhone? The Vistula? The Volga? The Danube? The Seine?

Rail and Telegraph.—How can a telegraphic message be sent from London to Toronto? Through what countries and cities would it pass? From Paris to Quebec? From Lisbon to Rio de Janeiro? From London to India via Alexandria? From London to Berlin? In travelling by rail from Paris to Constantinople through what countries and cities would you pass? How would you travel from Paris to Brindisi (*via Mt. Cenis*), and past what cities? From London to Aberdeen (*via York*)? From Cork to London (*via Dublin and Holyhead*)? From Glasgow to Manchester?



ANIMALS OF ASIA.

On the right is the two-humped Bactrian camel, often called "the ship of the desert"; it is valuable to the people of Central Asia, Tibet and China, as a beast of burden, as well as for its milk and hair. The ape seated on the tree is the orang-outang; it is nearly as large as a man, and belongs to south-eastern Asia, and to the islands of Borneo and Sumatra. On the left is the Indian elephant, easily trained to various kinds of labor. Near his feet lies the zebu, or domesticated sacred bull of India, marked by a large, fatty lump on the shoulder; the Hindoo harnesses zebras and rides on them, but consider it a sin to kill them. Then comes the peacock, with his gorgeous tail; he is also a native of India.

The next scene represents a buffalo keeping at bay a royal Bengal tiger. A single tiger is sometimes the terror of a neighborhood, prowling around the villages and carrying off unwary natives, till he earns the title of "man-eater." Next is presented a group of deer; many species of deer, several of them confined to this Grand Division, are distributed through Asia.

Finally, we have a native of Tibet mounted on a yak, a peculiar animal of high Central Asia. The yak gets its name from the grunt it is wont to utter; it has extremely long hair, and a thick, bushy tail, which is often cut off and sold while the animal is yet alive. Yaks' tails are carried before officers of state, and their rank is indicated by the number of tails. The Chinese dye these tails red, and wear them as cap-ornaments.

PHYSICAL ASIA.

1. GENERAL DESCRIPTION.

Asia forms the north-eastern mass of the Eastern Continent, of which Europe and Africa may be considered as vast peninsulas.

It is the largest of the Grand Divisions in size and the greatest in population. It is first in the number and height of its mountain systems; in the extent and elevation of its plateaus; in the size of its peninsulas, its salt lakes or inland seas, and its archipelagoes; and is remarkable for the diversity of race, language, religion and civilization of its inhabitants.

The **Area** of Asia is about 10,500,000 square miles, and its **Population** is estimated at about 800,000,000. It comprises about one-third of the land surface of the globe, and more than one-half of the population.

The **Outline** of Asia is very irregular, but not so much as that of Europe. The eastern coast is indented by numerous arms of the Pacific, and the souther-

coast by deep branches of the Indian Ocean. A remarkable feature is the chain of islands along the eastern coast. The **Coast-line** exceeds 35,000 miles in length.

The large **Rivers** of Asia are navigable far into the interior and afford facilities for commercial intercourse.

The **Natural Advantages** possessed by Asia are: —its valuable natural vegetable products, such as tea, coffee, rice, indigo, and spices; and its extensive mines of the precious metals and stones.

Asia is in many respects the most interesting of the Grand Divisions. It was here that the human race was first planted, and here that occurred most of the interesting events recorded in the Bible. It was the seat of early civilization and of the two great empires of antiquity, the Assyrian and Persian. Here, too, originated the tribes that peopled Europe and spread the elements of society, civilization and learning over the world. The descendants of the tribes that remained in Asia, however, instead of making progress, have either remained stationary or have sunk into the half-civilized or barbarous state. Nearly the whole population of Asia is **Pagan**.



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Asia is Pagan.

II. QUESTIONS

Outlines
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what continent
the west? What
connects Asia with
strait separates
North America from
Asia? What
islands near
Asia? Sea? (See
Hemisphere)
Japan Sea? Japan
peninsula in and Yellow
Sea? How
connected with Sea? The
Easter Sea? What
head of Yellow
land is between
Sea and China?
island is in the
of the China
gulf are called
China Sea? China
island is at the
extremity of a
smaller peninsula
it? What is
south of the
principal sea
Asian Peninsula?
What seas are
Indian Ocean
north of Asia?
What gulf borders
sea near Asia? What
the west? What
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Arabia? Is
Asia? In

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II. QUESTIONS ON THE PHYSICAL MAP.

Outlines.—What three oceans wash the shores of Asia? To what continents is it joined on the west? What isthmus connects Asia with Africa? What strait separates Asia from North America? Name the rivers penetrating the eastern coast. What islands and peninsula nearly enclose Behring Sea? (See Map of Western Hemisphere.) Okhotsk Sea? Japan Sea? China Sea? What peninsula is between Japan Sea and Yellow Sea? What islands are east of the Eastern Sea? How is Okhotsk Sea connected with Japan Sea? Japan Sea with the Eastern Sea? The Eastern Sea with China Sea? What gulf is at the head of Yellow Sea? What island is between the Eastern Sea and China Sea? What island is in the northern part of the China Sea? What two gulfs are connected with the China Sea? What great peninsula is at the south-eastern extremity of Asia? What smaller peninsula extends from it? What islands are to the south of these? Name the principal straits from the Malaysian Peninsula to the Red Sea? What great bay and seas are connected with the Indian Ocean? What gulf is north of the Arabian Sea? What gulf west? What four border seas are on the west of Asia? What interior sea is in the west? Name the most northerly cape. The three most southerly capes. What islands are in the Bay of Bengal? In the Arabian Sea? What large island is south of Hindoosan?

Highlands.—What belief forms predominate in Asia? In what portion are the most elevated lands? Name the plateaus of the Great Central Plateau Belt (beginning from the west)? Name the southern plateaus. What mountain range is on the plateau of Asia Minor? Between Asia Minor and Europe? What peak is near the Taurus Mountains? Near the head of the Red Sea? What ranges are north of the Plateau of Iran? Border on the Plateau of Tibet? On the Plateau of Turkestan? The Plateau of Mongolia? What two ranges are in the north-east of Highland Asia? In the south-east? What is the loftiest mountain system of Asia? (*The Himalaya Mountains.*) Name the deserts in the Plateau of Arabia. In the Plateau of Iran? What great desert is near the centre of Asia? In what part of Asia are the volcanoes?

Lowlands and Drainage.—Where is the principal lowland of Asia? What is it called? With what European plain is it connected? What mountain system partly separates them? In what part are the tundras or mossy marshes? What belt lies south of the tundras? What plains south-west of



PHYSICAL VIEW OF ASIA.

the forest-belt? What three great rivers drain the Great Siberian Plain? What great river flows into the Okhotsk Sea? What three large lakes or seas are in the south-western part of the Siberian Plain? What lake is in the southern part of northern Asia? What plains are between the Plateau of Iran and the Plateau of Arabia? By what rivers are they drained? Where do these flow? What plain is west of the Yellow Sea? Where are the Plains of India situated? Between what mountain ranges? By what rivers are they drained? Where do these flow? What is the general direction of the mountains, rivers and valleys of Indo-China? Which are its chief rivers? What two great rivers flow eastward into the Yellow Sea?

Ocean Currents.—What great ocean currents flow on the east of Asia? What is the direction of the Equatorial Current? Of the Black (*Japan*) Current? What currents are in the Indian Ocean? What variation have the currents in the Bay of Bengal and Arabian Sea?

Geographical Circles.—What great circle crosses the map of Asia? What islands does it cross? What two Zone Circles cross the continent? In which zone is the greater part of Asia? In which zone is the northern part? The southern peninsulas? Through how many degrees of latitude does Asia extend north of the Equator? Through how many degrees of longitude? Is the longitude east or west of the Prime Meridian?

Climate and Products.—With what parallel does the line marking the northern limit of trees nearly coincide? How does this compare with Europe? What are the vegetable productions of the Central Peninsula (*India*)? Of Ceylon? Of the Malaysian Archipelago? Of Indo-China? Of China? Of the Japanese Islands? Of Arabia? What are the most important animals of Arabia? Of India? Of Indo-China? Of the Malaysian Archipelago? Of highland Asia? What fisheries are carried on in the north and north-east? Where are the pearl fisheries? Where is the principal mineral region of Asia? Name the chief minerals. What precious stones are found? Where are they found?

III.—SURFACE AND DRAINAGE.

The **Continent of Asia** may be divided into three principal parts:—the **Great Central Highland**, the **Great Siberian Plain**, and the **Southern Peninsulas**. Besides these there is **Insular Asia**, or the Japanese Islands, in the east.

The **Great Central Highland** extends from the Caucasus Mountains on the west to the Pacific Ocean on the east, gradually expanding in breadth until it embraces most of the eastern part of the continent. It consists of vast elevated plateaus traversed by lofty mountain chains.

A belt of immense dry, sandy, or saline deserts extends through these plateaus from the Red and Mediterranean Seas almost to the Pacific Ocean. This belt is also continued westward through Africa to the Atlantic Ocean.

The high **Plateau of Pamir** may be considered as the central point, whence the mountain ranges diverge eastward and westward.

Three great mountain chains extend eastward. In the south the stupendous **Himalayas**, separating the Plateau of Tibet from the Plains of India, are continued in inferior chains to the Pacific; in the centre, the **Kuen-Lun**, enclosing the Plateau of Tibet on the north, are continued in the **Khingan** and **Peling Mountains**; in the north the **Tsien-Shan**, and the triple chain of the **Altai Mountains**, prolonged in the **Yen-kiang** and other lower ranges, extend to the north-eastern angle of the continent and form the northern slope to the Siberian Plain.



SCENE IN THE HIMALAYA MTS.

The vast **Plateau of Mongolia and Eastern Turkestan** forms a **Great Central Depression**, surrounded by mountains, extending from the **Tsien-Shan Mountains** on the west to the **Khingan Mountains** on the north-east, and encloses the great **Desert of Gobi**, 4,000 miles in length. From the mountain chains surrounding it, the slope is towards the four points of the compass as shown by the courses of the great rivers. The **Obi**, **Venessei** and **Lena** flow northward, through the vast plains of Siberia, into the Arctic Ocean.

The **An Moor**, **Hoang-ho** and **Yang-tse-kiang** descend the eastern slope through high mountains, valleys, and alluvial plains to the Pacific. On the south-east the **Mekong** and **Irawady** flow between long parallel chains of mountains into the Gulf of Siam and Bay of Bengal. The "sacred streams" of the Himalayas, the **Brahmaputra**, **Ganges** and **Indus** flow south into the Indian Ocean, and the **Euphrates** into the Persian Gulf. The **An Moor** and **Sir Daria** flow westward into the Aral Sea. In the great central depression and plain, the **Tarim**, after a course of 1,700 miles, disappears amid the sands of the desert of Eastern Turkestan, in **Lake Lob Nor**, the only outlet of which is by evaporation.

The **Plateau of Tibet** is the most elevated region inhabited by man, being higher in most parts than the top of Mount Blanc. It may be considered the nucleus of the mountain system of Asia, and is called by the orientals "the roof of the world." It contains several lakes, the most remarkable of which is **Lake Palte**, which forms a ring of water five miles wide round a circular island, on which is a Tibetan temple. This lake is held sacred.

The great central depression—the low **Plateau of Eastern Turkestan and Mongolia**—is from 2,000 to 4,000 feet above the sea, or from 6,000 to 10,000 feet lower than the neighboring Plateau of Tibet.

The **Himalayas** contain the highest mountains known—**Mt. Everest** being over 29,000 feet in height—and many peaks in them and in the adjoining ranges are above 25,000 feet. The summits of these enormous mountains are covered with eternal snow; and to the Hindoo, viewing them from the burning plains below, they have always been objects of wonder and religious veneration—"the Sacred Mountains."

The **Passes**, of which there are several, are of an amazing elevation, and are exceedingly difficult of ascent. That of **Karakorum** is 18,000 feet above the sea.

The **Kuen-Lun** and **Thian-Shan Mountains** are not so lofty as the Himalayas, although some peaks are supposed to be from 15,000 to 20,000 feet high.

The **Altai Mountains** extend about 5,000 miles across the continent, but do not average more than 5,000 feet in height.

From the Plateau of Pamir, the converging point of the great eastern ranges, the highlands are continued westward in the **Plateau of Iran**, with its lofty and mountainous borders, extending from the low plains of the Indus to the western extremity of the continent.

The two margins converge toward and being prolonged the Table-land.

On the north and farther west Black and Caspian between Europe and the sea.

Mt. Ararat, is 16,900 feet and about 15,000 feet above the sea.

The **Altitude** or 8,000 feet at 10,000 feet high.

Occasional practical route. The principal near the north.

In the east 3,000 to 5,000 to Mongolia, a

The great **Turkestan** Mountains in the Great Lakes and the Caspian.

It consists of the **Northern** dependant upon the **South and Southeast** nomadic Tartar Region is a very small animal. Some

The **Eastern** Western Par only about 25,000

The **Southern** division of the continent the de

They consist of the **Tan**, south of the **Malay Peninsula** moderate elevations.

Arabia for extends through the fertile **Middle East** comprises the **Red Sea** it from the Eritrean Mountains extending

The **Rivers** as they rise as very little limited rivers of **Arabia** useful for navigation those of the **Red Sea**

The **Caspian** with each one of them they are really salt.

The **Caspian** (**Insulae**)

forms a Great north-east, and from the mountains of the compass Arctic Ocean, and Yangtzei, eastern slope valleys, and Pacific. On the and Irawady parallel chains of f of Siam and sacred streams."

Brahmaputra, south into the Euphrates into Amoo and Sir to the Aral Sea,ession plain, of 1,700 miles, is of the desert Lake Lob Nor, by evaporation. It is the most by man, being on the top of considered the system of Asia, mts. "the roof is several lakes, which is Lake of water five nular island, on e. This lake

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The two marginal swells which are from 500 to 700 miles apart in the east, converge towards the west until they meet south of the Caucasus Mountains, and being prolonged between the Mediterranean and Black Seas, they form the Table-land of Asia Minor.

On the northern side are the Hindoo-Koosh and the Elburz Mountains; and farther west the lower ranges of the Taurus Mountains; between the Black and Caspian Seas are the Caucasus Mountains, forming the boundary between Europe and Asia. Occasional summits rise to the height of 15,000 feet above the sea.

Mt. Ararat, a solitary mountain rising from the high Plateau of Armenia, is 16,000 feet above the sea. Mt. Demavend, in the Elburz Mountains, is about 15,000 feet, and Mt. Elburz, in the Caucasus Mountain, 18,500 feet above the sea.

The Altitude of the plateau increases from 2,500 feet in Asia Minor to 6,000 or 8,000 feet at its eastern extremity, where the Suliman Mountains (8,000 to 10,000 feet high) separate it from the low plains of the Indus.

Occasional Passes in this high eastern mountainous border form the only practical routes of travel between the interior of Western Asia and India. The principal are:—the Bolan Pass, near the centre, and the Khyber Pass near the northern extremity.

In the eastern part of the plateau a remarkable Depression occurs, from 3,000 to 5,000 feet below the general level. This region is similar in character to Mongolia, and consists mainly of salt steppes and deserts.

The great Siberian Plain, including the Plain of Western Turkestan in the south-west, extends from the Elburz and Altai Mountains northward to the Arctic Ocean, and is separated from the Great Lowland Plain of Europe by the Ural Mountains and the Caspian Sea.

It consists of Three Belts of country somewhat similar to those of the great plains of European Russia.

In the North are mossy swamps, called Tundras, inhabited by nomad tribes dependant upon the reindeer and upon the fish of the great rivers. In the South and South-west are immense grassy regions, the home of barbarous nomadic Tartars, who subsist chiefly on sheep and horses. In the Middle Region is a vast evergreen forest, abounding in fur-bearing and other wild animals. Some cleared portions are inhabited by Europeans.

The Eastern Part is elevated and the surface is rugged or hilly; but the Western Part, including the Steps of the Obi Basin, is more level, and is only about 250 feet in average elevation.

The Southern Peninsulas of Asia form the most important division of the continent, and with the adjacent countries contain the densest population.

They consist of the three great peninsulas of Arabia in the west; Hindostan, south of the Himalaya Mountains; and Indo-China in the east, with the Malay Peninsula at its southern extremity. These are mainly table-lands of moderate elevation.

Arabia forms the western part of the great plateau and desert belt, which extends through Central Asia, and is separated from the Plateau of Iran by the fertile Mesopotamian Plains or Valley of the Euphrates. Hindostan comprises the Plateau of the Deccan, and the Plains of India which separate it from the Himalayas. Indo-China is a plateau traversed by ranges of mountains extending from the eastern end of the Himalayas southward.

The Rivers of Asia are large and are distinguished by their great length, but as they rise chiefly in the great central highland, their basins are comparatively limited and their tributaries are not so numerous as those of the great rivers of America. Those that flow into the Pacific Ocean are the most useful for commercial purposes. The Ganges and Euphrates are also valuable for navigation. Most of the other southern rivers are too rapid, and those of the north are frozen over for a great part of the year, so that they are not available for navigation.

The Caspian Sea and the Sea of Aral seem once to have communicated with each other and with the oceanic waters; now, cut off from the ocean, they are really salt Lakes. Both contain sturgeon and seals. Lake Balkash is also salt. Lake Baikal is the largest fresh water lake.

The Caspian Sea is about four times as large as Lake Superior.

(Insular Asia will be treated under the head of "Japan".)

IV.—CLIMATE, VEGETATION, ANIMALS AND MINERALS.

Asia, extending nearly to the equator on the south, and beyond the Arctic Circle on the north, has every variety of climate as well as every variety of products.

The Himalayas and the ranges that join them on the east and west make a marked separation between the tropical countries of the south and the temperate and cold regions of the north. In Asia the climate is not modified by the influence of the ocean-currents and winds to the same extent as it is in Europe.

The Great Central Highland is notable for its extremes of heat and cold. It is also to a great extent rainless, being cut off from the moist rain-bearing winds by the high surrounding mountain ranges.

In the vast regions of the Himalayas there is found every variety of surface, climate and vegetation. Rugged mountains, arid plains, fertile valleys, dense jungles and immense forests, produce the most striking diversities of scenery, climate and vegetation, often in close proximity. Thus, in the celebrated Valleys of Cashmere and Nepal the flowers and fruits of the tropics are found almost side by side with the productions of the temperate zones; while the snows of the Arctic Regions are seen in the distance on the summits of the lofty Himalayas.

Owing to the unequal and varying temperature produced by the interposition of large tracts of land, snow-clad mountains and heated plains of sand, the trade winds of the Atlantic and Pacific are, in the Indian Ocean, diverted from their course, and are subject to great and sudden irregularities. In fact, there is no northern trade-wind in the Indian Ocean, although the southern trade-wind blows constantly between Australia and Madagascar. The irregularities produced in the trade-winds give rise to the Monsoons, which blow half the year from the south-west, when the sun is north of the equator, and from the north-east during the remaining six months, when the sun is south of the equator. When the changes take place they are accompanied by terrific thunder-storms, torrents of rain, and furious hurricanes.

Typhoons are frightful revolving storms which occur every two or three years in the China Sea.

The Siberian Plain has the same characteristics as the northern part of the great Lowland Plain of Europe.

The winters are long and cold, and the summers are short. In the southern part there is a scanty vegetation; beyond that are dense forests, and north of them the scanty vegetation of the Arctic Zone.

The Southern Peninsulas have a tropical climate.

In no part of the world is the Rainfall heavier than in districts of India directly facing the vapor-bearing winds from the Indian Ocean, but Arabia comes within the rainless desert belt which extends through the great Central Highland.

The plains to the south of the Himalayas through which the Ganges and Brahmaputra flow, and the valleys of the rivers of the Eastern Peninsula, are to a great extent covered with swamps, jungles and forests.

The great desert belt is broken by the low and fertile Mesopotamian Plains or Valley of the Euphrates, where the date palm flourishes and wheat is largely cultivated.

Owing to the great diversity of elevation and to the variety of surface, the Products of Asia vary from those of the Tropics to those of the north Temperate Zone.

The chief products of the warm temperate regions of the eastern part are tea, rice and the mulberry; of the western, coffee, grains and spices. The fig, date and olive flourish, and hemp, flax, wheat, barley and other grains, as well as the fruits of the Temperate Zone, are extensively grown in the fertile valleys and alluvial plains of the higher latitudes. The principal Products of the Southern Peninsulas are rice, cotton, sugar-cane, coffee, indigo, and tropical fruits; the poppy (*opium*) and spices; the palm, bamboo, the wide-spreading banyan, the aloe, ebony and sandalwood.

The Wild Animals of Asia, as shown on page 84, are numerous. Our Domesticated Animals:—the horse, ass, goat, sheep, ox, hog; our common fowls; all of our grains excepting maize, and many of our most important fruits and vegetables, were originally derived from Asia.

South of the Plateau of Iran the plains which are undulating and alluvial were, in ancient times, the seat of mighty nations; and, being irrigated with great care, they were surpassingly fertile. Now, irrigation is neglected, and they have become barren wastes, except on the borders of the rivers. The **Metals** as well as the precious stones are widely distributed throughout Asia. The slopes of the Ural Mountains yield large quantities of gold, silver, platinum and iron.

POLITICAL ASIA.

QUESTIONS ON THE MAP.

General.—What country occupies the northern part of Asia? What empire the south-eastern part? What empire is south-west of it? What countries to the south? What insular empire to the east? What countries occupy the remainder of Asia?

Asiatic Russia, and Western Turkestan.—To what European State does Asiatic Russia belong? What are the divisions of Asiatic Russia? (*Siberia, Russian Turkestan, Trans-Caucasia.*) What countries border it on the south? What cities are on the Obi? What large branch has the Obi? What cities are on the Irish? What city is west of Tobolsk? What city is near Lake Baikal? South of Irkusk in the Chinese Empire? Opposite Maimatchin? What province is west of the Caspian Sea? What cities does it contain? What city is south-west of Tiflis? What province is east of the Caspian Sea? What rivers are in it? What city is on the Amoo? What city is south-east of Khiva? South-west of Balkara? What city east of Khiva? North-west of Khokan? What city east of Balkara near the frontier of Eastern Turkestan? What city east of Samarcand in Eastern Turkestan? Near what great peninsula in the north-east? What sea-port is in Kanchatka? On the Sea of Okhotsk? What island is in Turkestan? What mountains in the south and east?

Chinese Empire.—How is the Chinese Empire divided? In what part of the empire is China Proper? What province is west of China? What city is the capital of Tibet? What province is north-west of China? What province is east of Mongolia? South-east of Manchuria? What is the capital of Corea? What country is almost enclosed in the Chinese Empire on the west? What countries border China on the south? What two large cities are on the Yang-ssie-kiang? What city at its mouth? Which is the capital of China? What city is immediately south of Pekin? What canal connects Pekin with Haung-chow? What two great rivers does it connect? What great fortification protects Pekin on the west and north? (*The Great Wall.*) What city is in the southern part of China? What British island and sea-port is near Canton? What sea-port is opposite the Island of Formosa? What islands are off the south-east coast? What peninsula is opposite Japan?

Empire of Japan.—What waters surround the Japanese Islands? Which are the four principal islands of Japan? Which is the largest? What city is the capital? What sea-port is south of Tokio? What two other large cities are in Hondo (*Nippon*)? What city in Kinshu? What two cities are in Yesso? What islands are to the north-east of Yesso?

Indo-China.—What three countries are comprised in Indo-China? What country do they adjoin on the north? What peninsula extends from the south? What European nation possesses most of the western coast of Indo-China? What European nation possesses the southeastern part of the country? What city is the capital of Annam? Of Siam? Of Burma? What city near the mouth of the Irrawaddy is the principal abiding of Great Britain? What is the principal city of the French possessions? What river flows through Indo-China? What capes are at its southern extremities?

British Empire in India.—What countries border on British India on the north-west? The north? The east? What mountains form the northern boundary? What peninsula forms the greater part of British India? What country in Indo-China forms part of British India? What island, town and settlement in the Strait of Malacca belong to Britain? What large

island is south-east of Hindostan? What is the capital? What is its sea-port? What cities are on or near the Ganges? What city is east of Caw, *Bore*? In the extreme north-west? What city near the mouth of the Ganges is the capital? What two large cities are on the Jamna, a tributary of the Ganges? What two cities are north-west of Delhi? What important port is on the western coast, south of the Gulf of Cambay? What city is north of Bombay? What city is south-east of Bombay near the centre of the country? What important port is on the south-east (Coromandel) coast? What city south of Madras belongs to France? What large rivers flow through the northern part of India? What cape forms the southern point? The southern point of Ceylon?

Eastern Turkestan, Afghanistan and Beloochistan.—What two cities are in the western part of Eastern Turkestan? What city is the capital of Afghanistan? What city is east of Kabul near the border? What city in the south? What city is in Beloochistan? How is Eastern Turkestan separated from British India? Afghanistan? Beloochistan? What pass is between Kabul and Peshtawar (in British India)? What pass between Beloochistan and British India?

Persia.—What countries border on Persia? What city is the capital? What city is in the south of Persian Gulf? What city is in the south-west? What sea-port is on the Persian Gulf? What desert is in Persia? What gulf between Persia and Arabia?

Turkey.—What city in Europe is the capital of Turkey? What is the northern part of Asiatic Turkey called? What divisions are on the Red Sea? What three seas wash the shores of Asiatic Turkey? What divisions extend to the Persian Gulf? What division is partly possessed by Russia? What division includes Palestine? Where is it situated? What rivers flow into the Persian Gulf? What city is on the Tigris? On the Euphrates? What sea-port is on the Aegean Sea? What port in the north-east is on the Black Sea? What city is to the south of Trebizon? What two cities south-west of Erzeroum? What two cities are in Syria? What is the sea-port of Damascos? What island belonging to Great Britain is south of Asia Minor, in the Mediterranean? What sea is in Syria? What sea is in the north-east.

Arabia.—What country bounds Arabia on three sides? What independent state occupies the centre of the peninsula? The south-east? What great desert is in the north? In the south? What city is the capital of Turkish Arabia? What city is north of Mecca? What is the sea-port of Mecca? What town is in Nedjed? What is the capital of Oman? What town is near the strait of Bab-el-Mandeb on the Red Sea? What sea-port on the Gulf of Aden?

Review Exercises.

Countries.—*Where is it? How bounded? What is the chief town or city?*

Asiatic Russia? Siberia? Western Turkestan? Trans-Caucasia (*Georgia*)? Chinese Empire? Eastern Turkestan? Japan? Annam? Siam? Burma? British India? Afghanistan? Beloochistan? Persia? Turkey? Oman? Nedjed? Armenia?

Islands.—*Where situated? Between what waters?*

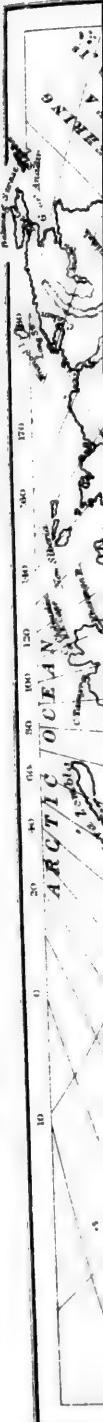
Saghalien? Formosa? Hainan? Hondo (*Nippon*)? Yesso? Sikok? Kiusiu? Kurile? Singapore? Ceylon? Cyprus?

Peninsulas.—*From what country does it extend? Between what waters?*

Corea? Kamchatka? Malay? Hindostan? Indo-China? Asia Minor? Arabia?

Capes.—*From what coast does it project?*

Lopata? Romania? Cambodia? Comorin?



What is the principal city of the French possessions? What river flows through Indo-China?

What capes are at its southern extremities? Singapore? Formosa? Hainan? Hondo (Nippon)? Yesso? Sikok? Kiushiu? Kurile? Singapore? Ceylon? Cyprus?

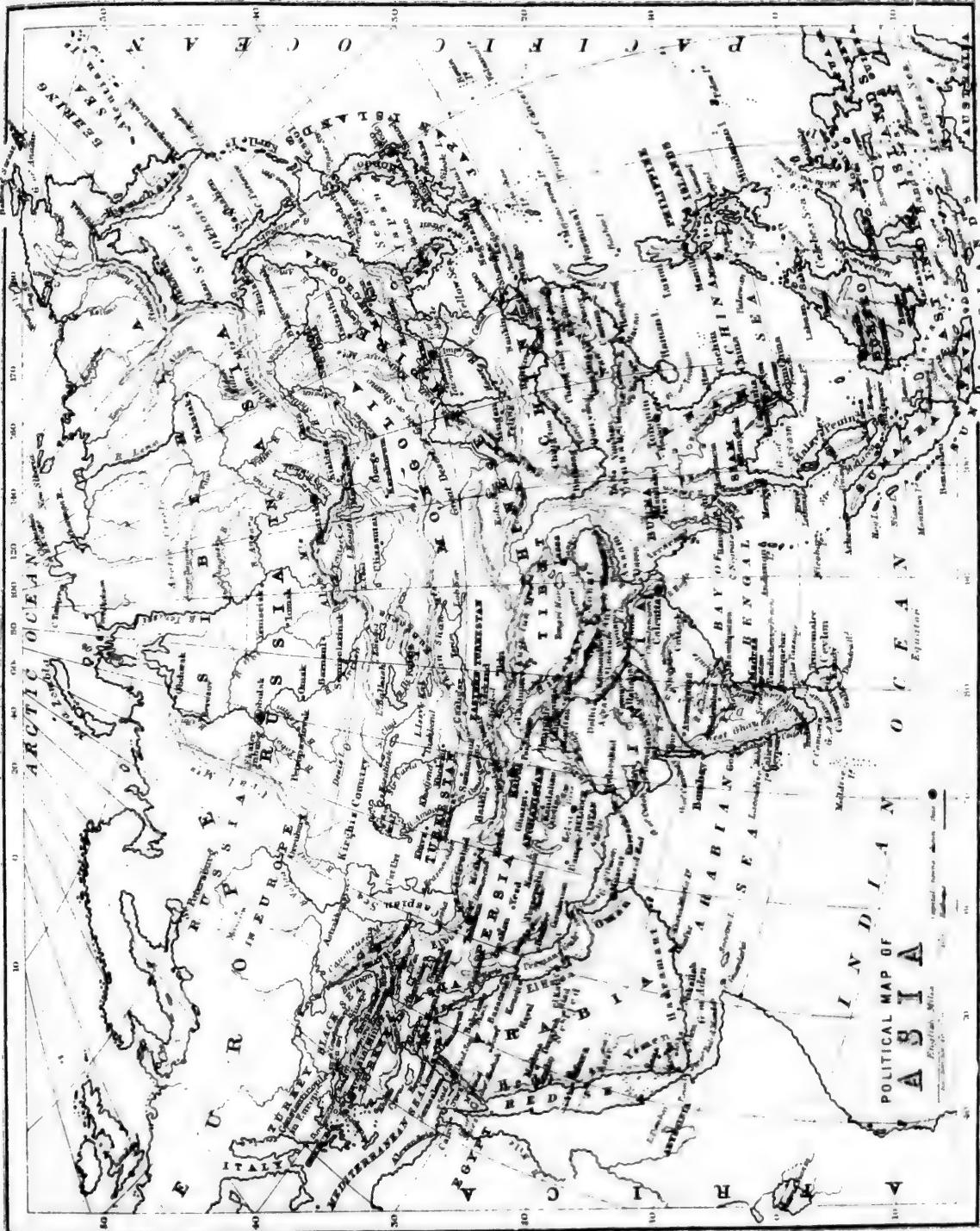
British Empire in India.—What countries border on British India on the north-west? The north? The east? What mountains form the northern boundary? What peninsula forms the greater part of British India? What country in Indo-China forms part of British India? What island, town and settlement in the Strait of Malacca belong to Britain? What is the capital of the French possessions? What river flows through Indo-China?

Capes.—From what country does it extend? Between what waters?

Corea? Kanchchatha? Malaya? Hindostan? Indo-China? Asia Minor? Arabia?

Capes.—From what coast does it project?

Lopatka? Romania? Cambodia? Comoros? Comoria?



Mountains.—
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Seas, Bays &
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Mountains.—Where are they?

Suliman? Altai? Yablonoi? Kuen-Lun? Thian-Shan? Himalaya? Peing? Nanling? Hindoo-Koosh? Elburz? Caucasus? Taurus?

Seas, Bays and Gulfs.—Where is it?

Japan? Okhotsk? Persian? Red? Siam? Bengal? Behring? Yellow? Pecheli? Eastern? China? Oman? Aden? Tonquin?

Straits.—Between what lands? What waters does it connect?

Corea? La Perouse? Bab-el-Mandeb? Palk? Formosa? Malacca? Ormuz?

Rivers.—Where does it rise? In what direction does it flow? Through what countries? Into what body of water?

Obi? Irtish? Amoo? Sir Daria? Yenesei? Lena? Arnoor? Yang-tse-kiang? Ho-ang-ho? Ganges? Jumna? Indus? Brahmapootra? Irrawady? Mekong? Menam? Saluen? Tigris? Euphrates?

Lakes and Seas.—Where situated? What outlet has it?

Van? Aral? Baikal? Caspian? Dead? Balkash?

Cities and Towns.—In what country is it? In what part? On or near what water?

Tomsk? Barnaul? Tobolsk? Gunsk? Ekaterinburg? Irkutsk? Maimatchin? Kiakhta? Tiflis? Kars? Khiva? Bokhara? Merv? Khokan? Tashkend? Samarcand? Kashgar? Petropavlovsk? Okhotsk? Lassa? Nankin? Shanghai? Pekin? Tien-tsin? Hang-chow? Hankow? Canton? Hong-Kong? Foo-choo? Amoy? Ningpo? Tokio? Yokohama? Kioto? Ozaka? Nagasaki? Hakodadi? Matsmai? Hué? Bangkok? Mandalay? Rangoon? Saigon? Singapore? Kandy? Colombo? Calcutta? Patna? Benares? Allahabad? Cawnpore? Delhi? Agra? Bombay? Surat? Madras? Pondicherry? Hyde-abad? Amritsar? Cashmere? Lucknow? Peshawur? Yarkand? Kabul? Herat? Kandahar? Kelat? Teheran? Ispahan? Tabriz? Meshed? Shiraz? Bushire? Bagdad? Bassorah? Smyrna? Trebizond? Erzeroum? Diarbekir? Aleppo? Damascus? Jerusalem? Beyrouth? Mecca? Medina? Jidda? E'Riad? Muscat? Mocha? Aden?

DIVISIONS OF ASIA.**The Political Divisions of Asia are:—****ASIATIC RUSSIA.**

CHINESE EMPIRE.

EMPIRE OF JAPAN.

INDO-CHINA—

KINGDOM OF ANAM.

KINGDOM OF SIAM.

EMPIRE OF BURMA.

BRITISH EMPIRE IN INDIA.

AFGHANISTAN.

BELOOCHISTAN.

PERSIA.

TURKEY.

ARABIA.

These countries are all **Absolute Monarchies**, except British India, which is under the rule of Great Britain. Asiatic Russia forms part of the Russian Empire under the **Czar**, and Asiatic Turkey part of the Turkish Empire under the **Sultan**. The Monarch of Japan is called the **Mikado**; of Persia, the **Shah**; those of Afghanistan and Beloochistan, **Khans**.

The prevailing form of government in Asia forms a marked contrast to the Republics of America and to the Limited Monarchies of Europe.

The only **Native Government** of Asia making any advance in civilization is that of Japan, which, from being the most exclusive, is now the most progressive.

The **Inhabitants** belong to three of the great races:—the **Caucasian**, embracing those of the peninsula of Hindostan and the countries north-west of it; the **Malay**, those of the Malay Peninsula; and the **Mongolian**, which includes by far the greatest number, all the remainder of the continent including the Turks of Asia Minor.

The extreme northern zone is thinly inhabited, and the great central plains can support only a nomadic or semi-civilized population. The fertile plains of China and tropical Asia are the great seats of population, and are rich in natural resources. In this region civilized nations have existed for thousands of years, but their civilization has long been stationary, and the swarms of common people are poor, ignorant and degraded.

The leading **Religions** of the world all originated in Asia—the **Jewish**, the **Christian**, the **Mohammedan**, as well as the two leading Pagan religions, **Brahmanism** and **Buddhism**.

The **Christian** and **Jewish Religions** are now represented in Asia by very few followers. About one half of all the followers of the **Mohammedan** faith are to be found in Asia, India alone containing about 50,000,000. The prevailing religions are **Brahmanism**, which has its seat in Hindostan, and numbers about 160,000,000 of followers, and **Buddhism**, which has its centre in Tibet, with about 340,000,000 of followers.

ASIATIC RUSSIA.

Asiatic Russia comprises more than one-third of Asia. It includes **Siberia** in the north, **Russian Turkestan** in the south-west, and **Trans-Caucasia** or Georgia between the Black and Caspian Seas.

Siberia occupies the whole of the great northern plain, and extends from the wooded slopes of the Altai Mountains to the tundras or dry wastes of the far north, where, although there are no glaciers as on the arctic coasts of North America, the ground is perpetually frozen to a great depth, the summer thaw affecting only the surface.

It consists, except in the south, almost entirely of steppes and marshes, across which the Obi, Yenesei and Lena rivers pursue their sluggish course to the Arctic Ocean.

The chief **Products** of Siberia are its furs from the forest-belt; gold, chiefly from East Siberia; copper, iron and gold from the Ural Mountains; and fossil ivory from the islands of New Siberia. Except in the upper valleys of the Yenesei and Lena and the lower valley of the Amoor, the **Soil** is unfit for cultivation.

Fossil ivory consists of the tusks of mammoths (large animals now extinct), which are found in the frozen regions of the New Siberian Islands, near the mouths of the rivers in the Tundras.

Siberia is the seat of an immense **Overland Trade** with China.

Teas, silks, satins, porcelain and other articles are obtained from the Chinese in exchange for furs, lambskins, metals, cottons and linens.

The longest inland commercial route in the world extends from Pekin in China, through Maimatchin, Kiakhta, Irkutsk, Tomsk and Tobolsk to Moscow and St. Petersburg, a distance of 4,500 miles.

Along the ice-bound coast of Siberia, the Swedish explorer, Prof. Nordenskjold, succeeded in making the passage from the Atlantic Ocean to Behring Strait (see p. 22). It is thought that this northern route, as far as the Lena River, can be utilized for purposes of trade.

A large part of the **Population** is composed of exiles from European Russia and their descendants. Criminal and political offenders are sent out every week from Moscow in convoys of two hundred or more, and the worst of these are compelled to labor in the mines, which belong to the Government.

The only inhabitants of Northern Siberia are native tribes of the Mongolian race—**Samoyedes**, a people similar to the Esquimaux. They are nomadic, and subsist chiefly on their herds of reindeer and on fishing.

Irkutsk, the capital of Eastern Siberia, is the principal city.

Tobolsk is the capital of Western Siberia. **Omsk** and **Tomsk** are important towns. **Ekaterinburg** has valuable mines. **Kiakhta** is the chief point for trade with China.

Russian Turkestan includes most of the country between the Altai Mountains and the Caspian Sea.

It contains a number of districts called **Khanates**, that is, petty states governed by **Khans** or chiefs, and has several populous cities on the great caravan routes. Many of these Khanates have been annexed by Russia, but some, though under Russian control, are nominally independent.

It also includes extensive steppes occupied by wandering tribes—"the Kirghiz Hordes." Along the banks of the rivers the country is fertile, but elsewhere it is almost desert.

The Inhabitants are Mohammedan Tartars (Mongols), and they live on the produce of their sheep, goats and camels, and by plundering caravans. The Government of the Khans is despotic. The staple articles and system of trade are the same as those of Siberia.

The Khanates of Khiva and Bokhara and the hilly tracts in the south, inhabited by barbarous Turcomans, constitute what is called Independent Turkestan. The Khanate of Khokan belongs to Russia.

Tashkend, the second largest city of Asiatic Russia, is the capital of Russian Turkestan. **Samarcand** was once the metropolis of a great Tartar Empire. **Khokan** is a large commercial town. **Khiva** and **Bokhara** are large and important towns on the caravan routes, and the latter is the principal seat of Mohammedan learning, and of the caravan trade between India and China on the one side, and Russia and Persia on the other.

Trans-Caucasia (the country beyond the Caucasus) includes Georgia, noted for the beauty of its people. The trade of the country is small, and the chief Products are:—the vine, the mulberry and cotton. The people belong chiefly to the Greek Church.

In the southern part, on the borders of Turkey and Persia is Mt. Ararat, celebrated as the resting-place of the Ark after the Deluge.

Tiflis, the largest city in Asiatic Russia, is the capital, and carries on an extensive caravan trade with Persia. **Kars** is noted for the siege it stood under General Williams of Nova Scotia.

THE CHINESE EMPIRE.

The Chinese Empire occupies the greater part of South-eastern Asia, and besides China Proper, includes the dependent Provinces of Tibet, Eastern Turkestan, Mongolia, Manchooria, and the tributary Kingdom of Corea.

Corea is ruled by a king, who pays an annual tribute to the Emperor of China. **Eastern Turkestan** gained its independence under Jakoub Khan, but now again forms one of the Chinese provinces.

Sooongaria (*Zungaria*) is a region of low mountains and open, fertile valleys, lying between the Thian-Shan and the western extremity of the Altai Mountains. It is the great gateway of caravan trade between eastern and western Asia. It formerly belonged entirely to China, but the greater part is now held by Russia.

In Extent China is about the same as the Dominion of Canada, but contains nearly one hundred times the population.

Of this enormous population, 350,000,000 are in China Proper, which comprises only about one-third of the whole area, and 25,000,000 are in the provinces. These latter, consisting chiefly of high plateaus and barren deserts,

are thinly inhabited. About 3,000,000 of the people live in boats and in floating gardens and rafts on the rivers and canals.

The Surface of China Proper is very varied, but generally speaking it consists of the broad plains or basins of the great rivers, with an extensive highland in the west and south. Every part is most industriously cultivated, and the fertile soil produces enough to sustain the vast population and to provide large supplies for export.

China contains valuable Mines of iron, copper and coal.

The chief Occupation of the people is agriculture, which is regarded as the noblest of employments.

The implements used are very rude and simple, but every acre is cultivated to the best advantage. The people of the Provinces are mainly pastoral, and raise vast herds of sheep and camels and goats in the grassy steppes of the lower valleys.

The principal Products are rice, the national food; tea, the national beverage; cotton and silk. One-tenth of the people live on fish which abound in the rivers.

The Chinese fishermen train pelicans to catch their fish.

All the Manufactures are the product of hand labor; and the Chinese are especially famous for their silks, satins, porcelain, and ivory carvings.

The tea-plant, shown in the engraving, attains a height of about five feet. The leaves are gathered three times each year. Green and black tea are not from different species of plants, but are differently prepared. To produce the former, the leaves, soon after being picked, are exposed to heat for a few moments in iron pans over charcoal-fires, then rolled, and again "fired" for two or three hours, coloring-matter being added. In the case of black tea, the leaves are exposed to the air for some time before they are fired at all, and are then fired and rolled several times. Tea was first introduced into Europe from China about 200 years ago.

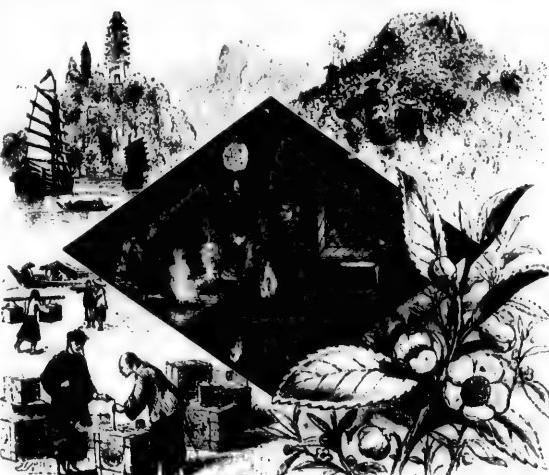
The art of rearing silk-worms and unravelling the threads of the cocoons was first practised by the Chinese, and thence spread over the world.

The Internal Commerce of the Chinese Empire is unparalleled in extent. Its chief water routes are the large canals, and navigable rivers and lakes. The mountains, steppes, and deserts of the interior plateaus are crossed by caravans of camels. The extensive Maritime Trade is chiefly in the hands of foreigners, to whom certain ports only are open. The British have about three-fourths of the whole.

A great Caravan Trade is carried on with Russia and Persia. The first has its great depot at Maimatchin, near the Russian frontier south of Irkutsk; the latter at Cashgar, in the west of Eastern Turkestan.

Commerce with foreign countries was formerly restricted, but within a few years nineteen ports have been opened to foreign trade, the principal of which are Shanghai, Canton, Tien-tsin, Foo-choo, Haing-chow, Ningpo and Amoy. The trade of Corea in rice, cotton, furs and rock-salt is chiefly with Japan.

The principal Exports are tea and raw silk; the chief Imports, cotton and woollen goods, metals and opium, the latter to the extent of \$40,000,000 annually.



TEA—THE LEAF AND BLOSSOM: PICKING, FIRING, SHIPPING.

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The **Government** of China is an absolute monarchy, and the Emperor is regarded as the representative of the Deity, and as the supreme master of the lives and fortunes of his subjects. The Religion most prevalent is **Buddhism**.

Education is compulsory, and all adult males are able to read and write and possess a knowledge of the elements of arithmetic. The education of girls is neglected.

Government officials of all grades below the Emperor are selected by means of public competitive examinations to test their scholarship, and the highest officers may be of the most humble parentage.

The **Inhabitants** of the Chinese Empire all belong to the Mongolian race, though they present great differences of appearance in the several parts of the Empire.

The Chinese are not surpassed by any people in the world for frugality, industry, and skill in their various occupations. They have a written language, and a literature extending back for many hundred years. For centuries they have possessed many inventions and practised many arts which have been considered as the outgrowth of modern progress, but, avoiding intercourse with other nations, they have made little or no progress, and have allowed themselves to be outstripped. They have possessed the mariner's compass, and practised the arts of printing, silk-weaving and paper-making from time immemorial. They were also very early acquainted with the manufacture of gunpowder, but did not make use of it in war. They are not a warlike people.

Among the more important public works are excellent roads, great canals, and the famous wall more than 1,200 miles long, completed B.C. 211, to keep the Mongol Tartars out of China. The Imperial Canal connecting a branch of the Peiho with Hang-chow is 600 miles long.

No other country possesses so many great and walled cities as China. Their population is variously reported, as the Chinese are very jealous of admitting foreigners into the interior of the country.

Pekin is the capital and the largest city of Asia. It is, like all Chinese cities, dirty, unpaved and undrained. **Shanghae**, the chief port, is the principal depot of the great basin of the Yang-tse-kiang, and has three-fourths of the foreign commerce. **Hankow** is the great centre of interior trade. **King-te-ching** is the chief seat of the porcelain manufacture; **Ningpo**, of the silk manufactures. **Canton** is the second city for foreign trade. **Foo-choo** is the chief place for shipping black tea. **Nankin**, once the populous capital of China, is now nearly all in ruins. **Macao** is a Portuguese settlement at the mouth of the Canton River. In the Provinces are:—**King-ki-tao**, the capital of Corea; **Lassa**, 11,700 feet above the sea, the capital of Tibet, and the residence of the Grand Llama, or chief priest of the Buddhists; **Maimachin**, the chief depot of the caravan trade with Russia, **Cashgar** and **Yarkand**, depots of the caravan trade in the west; and **Moukden**, the capital of Manchooria.

The Island of **Hong-kong** is at the mouth of the Canton River. It belongs to Great Britain, and is an important naval station for the Pacific. **Victoria** is the chief town.

The Islands of **Formosa** and **Hainan** belong to China. The former is fertile, and exports rice, sugar, camphor and jute. The latter is called "The Father of Storms" from the violent typhoons which seem to have their centre there.

EMPIRE OF JAPAN.

The **Empire of Japan** consists of four large and many small islands, said to comprise in all about 3,600 in number.

In **Extent** it is one-half larger than Ontario, but contains a population of 36,000,000. In position, size and population the Islands of Japan greatly resemble the British Isles.

The **Surface** is mountainous, and the islands are volcanic in formation, being part of the remarkable volcanic belt, which borders the Pacific on the west. Some of the summits are still eruptive, the chief of these is Fuji-yama (12,365 feet high), one of the sacred mountains of Japan, about sixty miles from Tokio.

The **Soil** in the south is productive, but not more than one-sixth of the whole area is capable of cultivation. Copper, iron, coal, and sulphur are the chief **Minerals**, and are found in abundance.

Agriculture is the chief **Industry**, and the products are similar to those of China—tea, tobacco, rice, wheat and other cereals. Fish abound on the coasts.

Among the vegetable productions are:—the camphor-tree, paper-mulberry and vegetable wax-tree, which furnishes the celebrated "lacquer" of Japan.

The principal **Manufactures** are those of silk, cotton, Japanned ware, porcelain and bronze.

The **Internal Commerce** is extensive, but for foreign commerce only certain ports are open—Yokohama, Hiogo, Nagasaki, Hakodaki, Niigata, and the cities of Tokio and Osaka.

The **Exports** are tea, silk, silk-worms' eggs, copper, and dried fish: the **Imports**, chiefly cotton and other manufactures, goods from Great Britain and the United States, sugar and other products from China.

The **Government** of Japan is a constitutional monarchy, and the Emperor is called the *Mikado*.

After centuries of nearly complete exclusion, foreigners have recently been admitted to Japan under treaties with several of the European Powers and with the United States. Since then, Japan has made unparalleled progress in civilization and in the adoption of western manners and customs. The feudal system, under which the country was governed by numerous lords, which formerly prevailed has been abolished, and the *Mikado* is now the sovereign of the State. The naval and military systems of Europe have been adopted, as well as all the modern inventions in steam, telegraphy and machinery.

The **People** belong to the Mongolian race, and have a similar belief to the Chinese, but differ greatly in language and political institutions. They surpass the Chinese in intelligence and equal them in mechanical skill.

The elementary **Education** of males is universal, systematic, and compulsory. Schools of science have been established under the instruction of English and American teachers.

Japan is said to possess a written history extending over 2,500 years.

Tokio is the national capital and the largest city; it has an extensive commerce, and its sea-port, **Yokohama**, is the chief centre of the foreign trade.

Kioto, the second city, was formerly the capital and residence of the Emperor, and is noted for the manufacture of porcelain and lacquered ware. **Osaka** is the principal port of the domestic commerce of the empire.

The **Kurile** and the **Loo-choo Islands** belong to Japan.

INDO-CHINA.

Indo-China, the Eastern Peninsula of Southern Asia, extends from the Bay of Bengal to the China Sea.

It comprises the Empire of **Burma**; the Kingdoms of **Anam** (*Cochin-China*) and **Siam**; **British Burma**; **Lower Cochinchina** (the most important colony of France in Asia); **Cambodia**, a small native kingdom under French protection; some petty states in the Malay Peninsula, ruled by native chiefs; and the **Straits Settlements** on the same peninsula, belonging to Great Britain.

The **Surface** is ridged by a series of mountain-chains covered with forests, extending from the eastern end of the Himalayas southward. Between these chains large and important rivers flow, the valleys of which yield abundant crops.

Indo-China has a hot, moist and, in the low grounds, often unhealthy climate; a fertile soil, luxuriant vegetation, and great abundance and variety of article productions.

It is one of the richest regions in Asia for **Minerals**. Gold is found in the mountains; tin abounds in the Malay Peninsula, in Burma, and in Yunnan; iron in the vicinity of the upper Menam; and copper, lead, silver and zinc are abundant. None of these are worked to advantage.

Agriculture is the chief **Industry**, but is carried on in a very rude manner; such, however, is the richness of the soil that nearly all articles of sustenance are produced without great labor. Rice is the chief product, but maize, sugar, tobacco and spices are cultivated.

Manufactures are few and simple, although the Burmese show some skill in building boats, casting bells, and making gold and silver ornaments.

The **Commerce** of the country is chiefly with Great Britain and China.

The chief **Exports** are rice, tobacco, sugar, spices and timber.

Most of the **People** belong to the Mongolian race, and their language resembles the Chinese. In the Malay Peninsula, the Malay race and the Malay dialects predominate. The native **Governments** are despotic, and the prevailing **Religion** is Buddhism.

Anam occupies the eastern part of the peninsula, and includes Tonquin, Cochin-China and Cambodia. Tonquin and Cambodia are under the protectorate of France.



SOME OF THE INDUSTRIES OF ASIA.



DESCRIPTION OF THE ENGRAVING.

The **Bamboo**, a tree-like grass growing to a height of fifty or sixty feet, has been called "one of Nature's most valuable gifts to uncivilized man." A decoction of its leaves furnishes a valuable medicine; its seeds are a favorite food; and its tender shoots are eaten like asparagus, or made into pickles and confections. A great variety of utensils is manufactured from its stem, and paper is made from its pulp. Dwellings are constructed entirely out of this plant.

It was in a bamboo cane that silk-worms' eggs were smuggled across the Chinese frontier and brought to Europe by two Persian monks in the sixth century.

Indigo is a blue dye obtained from the leaves of several species of plants largely cultivated throughout the warm regions of Asia. The plants are cut in the flowering season, and steeped, pressed, and agitated in vats, until the coloring-matter is precipitated. The water is next drawn off; the precipitate is boiled, and then pressed and dried.

Gutta-Percha is the congealed sap of a tree peculiar to the East Indies. The natives have been acquainted with the gutta, or gum, from an early period, and they have pursued the destructive plan of cutting down the trees, in order to obtain it in the most convenient way. Tapping, which is done without injury to the tree, is now practised to some extent. The milky juice which flows from the incisions made is thickened by boiling.

Sago is manufactured from the pith of the sago (*meal*) palm. At a certain age, the tree is felled and cut into sections; these are split, and the tissues of the trunk are subjected to a process of washing and sieving, by which the granules of starch are separated. These, when dried, constitute sago-meal; if granulated, they form the pearl-sago of commerce. Three trees furnish as much food-matter as an acre of wheat.

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Hue, the capital, is one of the most strongly fortified cities of Asia. **Kesho (Hanoi)** is the capital of Tonquin.

Siam includes the interior of Indo-China, together with the larger portion of the Malay Peninsula.

Siam is the most progressive of the countries of Indo-China. Considerable attention has been given to education, and the arts and sciences of Europe have been introduced into the Kingdom to some extent.

Bangkok, the capital, is a large city and the chief commercial emporium; it stands in a marshy region, and many of the houses are built on piles or on rafts of bamboo.

The Empire of **Burma** occupies the upper and middle portions of the basin of the Irrawaddy, and contains some of the most valuable mineral deposits of the peninsula.

Mandalay, the capital, is surrounded by a rich, highly cultivated and beautiful country.

Lower Cochin-China, including the delta of the Mekong and the adjoining coast regions, belongs to France.

Its resources are very imperfectly developed, although considerable progress has been made since the French authority was permanently established in 1861. From the country being entirely alluvial the climate is very unhealthy and fatal to Europeans.

Saigon, a fortified port, is the capital. **Udong** is the capital of Cambodia.

Yunnan, for a time independent, but now again a province of China, is one of the richest mineral regions of Asia. It exports ivory, musk, flax and horses.

British Burma, a Province of British India, occupies a long narrow strip of territory on the western coast of the Peninsula. It includes Tenasserim, Arracan and Pegu.

The valley and delta of the Irrawaddy are extremely fertile, but owing to the want of good roads, the province is thinly peopled and the commerce is small.

Rangoon is the chief city, and exports petroleum, teak-timber, rice and cotton; **Moulmein**, near the mouth of the Salween River, is a city of considerable importance.

The **Straits Settlements**, belonging to Great Britain, comprise the Islands of Penang and Singapore off the coast of the Malay Peninsula; Province Wellesley, a district on the coast opposite Penang; and Malacca, on the south-west coast of the Malay Peninsula.

Singapore, a fortified city commanding the Strait of Malacca, is the principal British sea-port in Indo-China; it is a great mart for sago, tin, rice, spices and gutta-percha.

The possession of the Straits Settlements gives to Great Britain the command of the Strait of Malacca, the direct route of communication between China, Japan and the west.

INDIA.

India comprises the vast Central Peninsula of Southern Asia, extending southward from the Himalaya Mountains.

It includes **British India**, and a large number of **Native States**, whose chiefs all acknowledge the suzerainty of Great Britain. The Island of **Ceylon**, to the south-east of the peninsula, forms a separate colony.

The Queen of England is **Empress of India**. About three-fifths of the country is directly under British rule, and the remaining two-fifths is under British protection and control, excepting only the Independent States of Nepal and Bhutan. It is the richest and most important dependency ever possessed by any nation. In **Extent**, India is less than half the size of the Dominion, but contains sixty times the population.

The **Surface** consists of three great divisions—the **Himalayan Highland** in the north; the Plateau of the **Deccan** in the south, enclosed by the **Eastern and Western Ghauts** which

meet at the southern extremity of the country, and the Vindhya Mountains on the north; and the extensive fertile **Northern Plains** between the Himalayas and the Deccan, watered by three great rivers, the Ganges, Brahmapootra and Indus.

The **Coast-line** is remarkably unbroken, and there are very few harbors. At Madras, passengers and merchandise have to be landed in boats and rafts through the surf.

The south-eastern coast is called the **Coromandel**, and the south-western the **Malabar Coast**.

The **Soil**, especially in the great river basins, is remarkably fertile and a mirror adapted to the growth of the most valuable vegetable produce. Vast forests of teak, cocoa, bamboo, banyan and various palms grow luxuriantly in the higher regions.

A large part of the country is covered with jungles, inhabited by wild animals—the tiger, elephant, boa-constrictor and others.

The Valley of the Ganges is one of the most fertile and populous regions in the world, being surpassed only by portions of China. The lower part of the Plain of the Indus is mostly desert.

India possesses extensive deposits of coal and iron, and is celebrated for its gold, diamonds, and precious stones.

The **Climate** of India, except in the elevated Himalaya region, is tropical, with two seasons, the wet and the dry. In the alluvial plains it is hot and very unhealthy for Europeans, but in the hill regions it is cool and salubrious.

The chief **Industry** of the country is agriculture.

Rice, the chief article of food of the people, is raised in great abundance, and in the production of cotton India is surpassed only by the United States. Indigo, jute, flax and tea are extensively cultivated, and large quantities of opium, produced in the poppy gardens of the fertile Ganges Valley, are sent to China. Silk is also an important article of culture.

In **Manufactures** the Hindus are very skilful. The fine shawls of Cashmere, woven from long silky goats' hair, as well as the silks, muslins, carved ivory and metal work of India, have a world-wide reputation.

The **Commerce** of India is very large, and is chiefly with Great Britain through the Suez Canal.

The products of the interior are brought to the great sea-ports by railways, of which there are now 9,875 miles in operation. Steamers navigate the principal rivers, but, excepting the Ganges, which is navigable to Alahabad, most of the rivers are too rapid to be available for any distance.

The chief **Exports** are cotton, opium, indigo, rice and silk, and the **Imports**, manufactured goods.

The **People**, who are called Hindus, have sprung from the same great Aryan family, from which successive tribes went forth to colonize Europe.

They thus belong to the same parent-stock as most of the European nations and ourselves, and are similarly related to the Persians and Afghans, who are also of Aryan descent. The population averages one European to about 3,500 natives. Most of the Europeans belong to the army or to the Civil Service of British India. The army is composed chiefly of native soldiers called "Sepoys," with British officers.

The Hindus of the higher class are learned scholars, and have a rich literature, extending back for forty centuries, preserved in one of the most polished and harmonious languages, the ancient Sanskrit. The prevailing language spoken at the present day, the Hindostane, is a corrupted form of the Sanskrit.

The common people are poor, ignorant and superstitious. Only the wealthier classes are educated, and the women are not educated at all.

Brahmanism is the prevailing **Religion** of the Hindus, but there are many Mohammedans, some Buddhists, and some Parsees or Persian fire-worshippers. The sacred books of the Brahmanic religion, called the Vedas, are said to have been written 2,500 years before the Christian era.

The Hindus number about 150,000,000, the Mohammedans about 40,000,000.

The **Supreme Government** of British India is vested in the Viceroy or Governor-General, assisted by an Executive Council of six members, and the Commander-in-Chief of the army. These are all appointed by the British Government.

There is also a Legislative Council of twelve members (besides the seven members of the Executive Council), of whom one-half must be unconnected with the public service. Bengal, Madras, and Bombay have Councils of their own, and the Council of India legislates for those provinces which are unprovided with Local Councils (see Statistical Table below), and on matters of exceptional importance affecting the Empire.

British India comprises eight Provinces: Bengal, North-west Provinces, the Punjab, the Central Provinces, British Burma, Assam, Madras, and Bombay. These provinces are each under the control of a Governor, a Lieutenant Governor, or a Chief Commissioner. They each have their own civil government, independent of the others, but subordinate to the Supreme Government.

Nepaul and **Bhotan** in the Himalayan highlands are the only independent states in India.

The **Revenue** of India, independent of that of the native Princes, amounts to over 350,000,000 of dollars. The **Army** numbers about 190,000 officers and men (Europeans, 65,000; natives, 125,000). For police duties and frontier service this force is supplemented by about 190,000 Native Police, officered mainly by Europeans.

Calcutta, the capital of British India, is situated on the Hoogly (*Hugli*) River, the western mouth of the Ganges, eighty miles from the Bay of Bengal. Its commerce is larger than that of any other city in Asia.

Bombay and **Madras** are the next most important cities. They are both connected with Calcutta by railway, and Bombay

is the principal port for the English and French lines of steamers running from Europe to Asia by way of the Suez Canal.

Delhi, on the Jumna, was formerly the capital of India. **Benares**, the centre of Brahmanical learning, is held sacred by the natives. **Lucknow** is the capital of Oudh, and has a large river trade; **Lahore** is the capital of the Punjab; **Allahabad** of the North-West Provinces; and **Jubbulpore** of the Central Provinces. **Patna** has an extensive trade in opium and rice.

There are many other large and important cities: such as Cawnpore, Amritsar, Cashmere, Surat, Agra, Bangalore, Hyderabad, each containing a population exceeding 100,000.

Ceylon is a large, mountainous, and productive island, forming a separate British Colony, with its own Government. It possesses a milder and more healthy climate than the mainland.

The natives are called Singalese, and belong to the same race as the Hindus. Their religion is Buddhism. It is the most important coffee producing country belonging to Great Britain, and is noted for its precious stones, pearl-fisheries and ivory. The forests yield valuable wood—teak, rose-wood, ebony, and sandal-wood.

The principal **Exports** are cinnamon, coir-stuff, coffee, and cocoanut-oil.

Colombo is the capital, and **Galle** the chief sea-port.

The **Maldives** and **Laccadive Islands**, west of India, are unimportant. The **Andaman** and **Nicobar Islands**, in the Bay of Bengal, are mountainous, and produce valuable timber. There is a penal settlement on the Nicobar Islands.

The **French** possess Chandernagore, north of Calcutta; Pondicherry, Yanon and Karikal on the Coromandel Coast; and Mahé on the Malabar Coast.

The **Portuguese** possess Goa with a small town, Panjim or New Goa Settlement, on the western coast of the peninsula.

AREA AND POPULATION OF BRITISH INDIA ACCORDING TO THE CENSUS OF 1881—STATISTICAL REFERENCE TABLE.

PROVINCES AND STATES.	UNDER DIRECT BRITISH ADMINISTRATION.		NATIVE STATES.		TOTAL.	
	Area in Sq. Miles.	Population.	Area in Sq. Miles.	Population.	Area in Sq. Miles.	Population.
Native States under the Government of India—						
Ajmere.....	2,711	460,722	....	....	2,711	460,722
Berar.....	17,711	2,672,673	24,733	4,186,188	17,711	2,672,673
Mysore.....	....	....	....	....	24,733	4,186,188
Coorg.....	1,583	178,302	....	....	1,583	178,302
Central India.....	....	....	89,098	8,000,000	89,098	8,000,000
Rajputana.....	....	....	130,089	10,269,360	130,089	10,269,360
Hyderabad.....	....	....	80,000	9,167,789	80,000	9,167,789
Baroda.....	....	....	8,750	2,185,005	8,750	2,185,005
Manipur.....	....	....	7,584	150,000	7,584	150,000
Andaman and Nicobar Islands.....	3,285	26,198	....	....	3,285	26,198
TOTAL	25,290	3,337,895	341,144	33,958,342	366,434	37,296,237
Bengal.....	156,081	66,530,127	37,988	2,653,492	194,069	69,183,619
Assam.....	46,341	4,908,276	....	....	46,341	4,908,276
North-West Provinces.....	81,748	34,720,128	5,125	745,675	86,873	33,465,803
Oudh.....	24,213	11,387,741	....	....	24,213	11,387,741
Punjab.....	107,010	18,794,260	104,058	4,852,360	211,068	23,646,620
Central Provinces.....	84,208	9,500,000	29,112	1,700,000	113,320	11,500,000
British Burma.....	87,220	3,736,771	....	....	87,220	3,736,771
Madras.....	140,430	30,839,181	9,818	3,336,365	150,248	34,175,546
Bombay.....	125,418	16,454,414	66,319	6,905,523	191,737	23,359,937
TOTAL FOR BRITISH INDIA	877,959	198,508,793	594,464	54,151,737	1,474,423	252,660,550
French Possessions.....	....	....	....	....	178	276,649
Portuguese Possessions.....	1,086	444,987
TOTAL OF ALL INDIA	1,473,687	253,382,186

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AFGHANISTAN AND BELOOCHISTAN.

Afghanistan and **Beloochistan** occupy the eastern part of the Desert of Iran, a high plateau traversed by mountain ridges.

Afghanistan is important because it commands the approaches to India from the north-west.

The country is generally of little value for cultivation, but contains some fertile parts and rich oases, which are inhabited by a settled population, and determine the route of the caravans between India and Persia.

The majority of the **People** of both countries belong to fierce, wandering, and warlike tribes, who live in tents and depend for subsistence mainly on their herds of horses, goats, asses and camels.

The People are divided into a number of tribes or Khanates, each under its own khan or chief. Sometimes they unite under one chief, but these unions rarely last very long.

The Khan of Kabul is the nominal head of the Afghans, and the Khan of Kelat of the Beloochees. The Religion is Mohammedan.

The **Trade** of the towns is chiefly in the hands of the Hindoos and Persians.

There are no roads for wheeled vehicles, and internal commerce is carried on exclusively by caravans. The only access to the country from India is by passes through the mountains. The most famous of these are the Khyber Pass and the Bolan Pass through the Suliman Mountains.

Kabul (6,400 feet above the sea) is the capital of Afghanistan, and **Herat** is an important town on the caravan route between Persia and India. **Balkh**, the ancient Bactria, is one of the oldest cities in the world. **Kandahar** is important as a military station on the route to India. **Kelat** is the capital of Beloochistan.

PERSIA.

Persia occupies the western part of the Desert Plateau of Iran (see p. 96).

In ancient times Persia was one of the most powerful and celebrated empires, but has now sunk to very small importance.

In Extent, it is about twice the size of Ontario and Quebec, but contains rather more than double the population.

The Surface of the country consists mainly of sandy, salt deserts bordered by mountain ranges. Wherever irrigation can be used, the soil is productive.

In the provinces bordering on the Caspian Sea, the mulberry and vine are grown; and along the shore of the Persian Gulf is a fertile lowland. Wheat

and barley are cultivated in the uplands—rice, tobacco, cotton and indigo in the low plain. The date-palm is universal in the oases, and Persia is famous for its extensive fields of roses.

The **People** are comparatively cultivated and progressive. They have a literature, are not ignorant of modern improvements and excel in several branches of manufacture. They are chiefly Mohammedans. Except in the towns, their pursuits are chiefly pastoral. The deserts and oases have a large nomadic population, mostly hordes of Turks, Arabs and Kurds.

The **Manufactures** of Persia—silks, shawls, carpets, arms and jewellery—are in high repute.

The chief **Exports** are silks, tobacco, skins, shawls, carpets, attar of roses, opium and wool.

The **Government** is a despotism under the Sovereign or Shah, who exercises the power of life and death over his subjects.

Teheran, the capital and largest city, contains the palace of the Shah. The city consists of low mud-houses, and crooked, ill-paved streets.

Tabriz, the next city, is an important centre on the commercial route between India and Russia.

Ispahan, the former metropolis, still contains many monuments of its former grandeur, but is fast falling into decay.

Bushire is the chief sea-port on the Persian Gulf, and **Reshd** on the Caspian.

Mesched is the Holy City of Persia.

TURKEY IN ASIA.

Turkey in Asia comprises the most western part of Asia, and forms the largest portion of the Ottoman Empire (see p. 90).

It includes the seat of many ancient nations, among which are Phoenicia, the Holy Land, the States of Asia Minor, Assyria and Chaldea.

In Extent, Turkey in Asia is nearly twice the size of Ontario and Quebec, but contains nearly four times the population.

It embraces the peninsula of **Asia Minor** between the Black and Mediterranean Seas; **Syria** (including Palestine, or the Holy Land) on the eastern border of the Mediterranean; part of **Armenia**, in the north-east; a strip of Arabia bordering on the Red Sea; and the **Valley of the Euphrates**; and the district of **El Hassa** (*Lahsa*) on the western side of the Persian Gulf. Being bordered by four great seas, it has a natural access to the remotest countries of the earth.

The Surface consists of extensive, treeless plains, which, dur-



KHYBER PASS.

ing the dry season, become desert; fertile, cultivable valleys and small plains; and mountains rich in pasture-lands, forests, and mines of iron, copper, lead and silver.

In the fertile regions the **Soil** is highly productive: grains and fruits can be produced in abundance, but agriculture is neglected, except near large towns, owing to the country being infested with bands of robbers, and to the misrule of rapacious pashas (Turkish governors). The leading articles cultivated are the olive, mulberry, white poppy, tobacco, figs and other fruits.

The **Population** is composed of various races separated from one another by descent, language, and religion. The majority are Mohammedans, mostly Turks in Asia Minor, and Arabs in the southern Provinces; the Christians are Greeks on the western coast, and Armenians in the north-east.

Wandering tribes, possessing large flocks and herds, inhabit the central table-lands of the Syrian desert.

Manufactures of silk, cotton and leather are carried on, but, generally speaking, there is a great stagnation of industry and enterprise.

Maritime **Commerce** is in a low state, and is chiefly in the hands of the Greeks. For interior trade, there are few roads, and the chief cities are connected with Arabia and Persia only by the caravan traffic.

The chief **Exports** are opium, tobacco, oil, attar of roses, dried figs, dates, silk, leather and sponges.

Asiatic Turkey is divided, for purposes of Government, into a number of provinces, each under the control of a Governor or Pasha, and all subject to the Sultan at Constantinople.

The earliest States of which history gives any account, excepting Egypt, were situated in the basin of the Tigris and Euphrates Rivers, and in the plains and mountains of Syria. Here great and rich cities, organized governments and schools of learning existed centuries before the dawn of civilization in Europe.

In Asia Minor:—**Smyrna**, on the Ægean Sea, is the chief sea-port, and has the largest export trade in figs, sponges, and other products of Turkey. **Trebizond** is the chief port on the Black Sea. **Brusa** is the centre of an important silk trade.

In Syria:—**Damascus**, the largest city, is also one of the most ancient. It is celebrated for its manufactures of damasks, cotton, iron and glass ware, and maintains a profitable caravan trade with various points. **Beyrouth** is the chief sea-port. **Jerusalem**, the scene of the most important events recorded in Scripture, and once the most famous city of the East, is now a place of but 28,000 inhabitants—Mohammedans, Jews and Christians.

In the Valley of the Euphrates:—**Bassorah** on the Euphrates, **Bagdad** and **Mosul** on the Tigris, are the principal cities.

In Turkish Arabia:—**Mecca** and **Medina**, respectively the birth-place and burial-place of Mohammed, are held sacred by his followers; and caravans of pilgrims come from all parts of Arabia, Asia, and Northern Africa annually to Mecca. **Mocha** is noted for exporting excellent coffee. **Jidda** is the port of Mecca.

The Islands of **Rhodes**, **Scio** (nearly destroyed by an earthquake in 1883), and all the Asiatic Islands of the Archipelago, belong to Turkey.

The Island of **Cyprus** in the Levant, though nominally a portion of the Turkish Empire, now belongs to Great Britain. In extent and population it is nearly double the size of Prince Edward Island. It exports cotton, wine, dried fruits, and sponges. **Nikosia** is the chief town.

PALESTINE.

Palestine, or the Holy Land, occupies the eastern coast of the Mediterranean Sea from the Mountains of Lebanon southwards.

The **Surface** forms an elevated plateau, stretching, with the Sinai Peninsula and the intervening region of Arabia Petra, from north-east to south-west, from the Mountains of Lebanon to the Gulf of Suez.

The plateau has a comparatively regular surface with occasional groups of short ridges of mountains. The slopes are deeply furrowed by the short and rapid streams which descend to the Jordan and to the Mediterranean, presenting from north to south a continuous succession of hills and valleys. A narrow plain skirts the Jordan, and small plains border on the Mediterranean shore.

From this central plateau the land descends on the west to the Mediterranean, and on the east to the Jordan Valley, the Dead Sea and Gulf of Akaba.

The entire course of the **Jordan**, from the Sea of Merom southward, lies below the sea-level. The surface of the Dead Sea is 1,286 feet lower than the Mediterranean, and nearly 4,000 feet below the level of the surrounding country.

The **Sinai Peninsula** has an average elevation of not less than 2,000 feet. The southern portion is a mass of mountains, of which **Mt. Sinai** is believed to be the highest.

The **Climate** is hot, and in winter mild. There are two rainy seasons: the "early" from the beginning of November to the end of December, and the "latter rain" during April and May.

Agriculture and **Manufactures** are neglected in Palestine, as they are in all the countries under Turkish rule.

The elevated table-lands are barren, but the valleys are covered with grain-fields, vineyards, and plantations of olive, fig, apricot and pomegranate trees. The slopes which form the eastern border of the Dead Sea are desert and desolate in the extreme. On the Mediterranean shore the plains are generally sandy and barren.

Palestine, the "Promised Land" of the Israelites, was the scene of most of the important events recorded in the Bible.

Around the southern part of the Dead Sea were the "Cities of the Plain." In the mountain region of Sinai the law was given to Moses. Jerusalem became the capital of the mighty empire under David and Solomon, and later on, Palestine was the scene of the life and labors of Jesus of Nazareth. Still later it was noticeable as the scene of the battles of the Crusades.

ARABIA.

Arabia forms the Western Peninsula of Southern Asia, extending south-eastward from Asia Minor.

In Extent it is nearly as large as the Peninsula of Hindostan, but only contains about 5,000,000 inhabitants.

The **Surface** consists of an interior plateau bordered, except on the north-east, by low mountainous ranges, with many fertile valleys; of extensive sandy deserts in the north and south, with small oases; and of a narrow belt of lowland along the greater part of the coast, mostly arid, but containing some productive districts.

The mountainous regions receive most moisture, and are in general fertile, producing coffee, aromatic gums and spices, dates, figs, grapes and other fruits.

The country is divided into:—**Turkish Arabia**, including the Provinces of Hedjaz, Asir and Yemen on the shore of the Red Sea, and Lahsa (*El-hasa*) on the Persian Gulf; and the independent states of **Oman** on the south-eastern coast, and **Nedjed** in the centre of the country.

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Yemen, Oman and Nedjed are the most fruitful parts of the peninsula. **Hedjaz** (under Turkish rule) is the Holy Land of the Mohammedans, containing the cities of Mecca and Medina.

The **Arabs** are partly dwellers in towns and partly inhabitants of the desert. They are all Mohammedans.

The inhabitants of the desert, called **Bedouins**, constitute numerous independent tribes, each under its own **Sheik** or chief. They lead a wandering life, changing the site of their encampment, according to the necessity of finding pasture for their flocks. The Bedouins look with contempt upon the settled pursuits of those who live in towns, and are most rapacious robbers of the caravans which traverse the country.

The **Commerce** of the country is considerable, and is carried on by means of caravans.

The Arabs gather the products of Africa and Persia, and exchange them for cotton goods and other manufactures obtained from India and Europe. The camel is the principal beast of burden, and most of the camels employed in the caravan trade of western Asia are raised in Arabia. Nedjed is famous for the finest breed of the celebrated Arabian horses.

The chief **Exports** are coffee, dates, gum-arabic, myrrh, aromatic and medicinal drugs, and pearls. The most valuable pearl fishery in the world is at Bahrain Island, in the Persian Gulf.

Oman is divided among several native rulers, the most powerful of whom is the Sultan of Oman (commonly called the Imam of Muscat). **Nedjed** is ruled by a Sultan.

Both of these states contain a numerous settled population, who are engaged in agriculture and commerce. Oman is one of the most powerful naval states in Asia, and one of the most commercial. The Imam claims sovereignty over the larger part of the eastern and southern coasts of Arabia, and over the African coast from Cape Guardafui to Cape Delgade.

Sana is the chief city of Yemen; **Muscat**, the capital of Oman, is the largest city of eastern Arabia, and **E'Riadh** is the capital of Nedjed.

Aden, near the entrance to the Red Sea, belongs to Great Britain, and is an important coaling and supply station for steamers passing through the Suez Canal to India. **Perim** and some other small islands off the coast also belong to Great Britain.

ASIA—STATISTICAL REFERENCE TABLE

STATE.	AREA IN Sq. MILES.	POPULATION.	PEOPLES TO A Sq. MILE.	CAPITAL.	POPULATION.	PRINCIPAL EXPORTS.
Asiatic Russia—						
<i>Siberia</i>	4,773,090	3,911,300	1	Irkutsk	33,800	
<i>Russian Turkestan</i>	1,277,722	5,239,000	4	Tashkend	150,000	
<i>Trans-Caucasian</i>	94,900	3,697,276	39	Tiflis	104,024	
Western Turkestan—						
<i>Khanate of Khiva</i>	22,300	700,000	32	Khiva .....	.....
<i>Khanate of Bokhara</i>	84,000	2,100,000	25	Bokhara	150,000	
Chinese Empire	4,504,733	379,700,000	84	Pekin	1,500,000	
Japan	146,005	35,923,313	253	Tokio	811,510	
Indo-China—						
<i>Kingdom of Annam</i>	169,271	21,000,000	124	(Hué	30,000	
<i>Kingdom of Siam</i>	277,057	5,750,000	20	(Hanoi in Tonquin)	120,000	
<i>Empire of Burma</i>	190,500	4,000,000	21	Bangkok	600,000	
<i>French Possessions</i>	54,747	3,097,013	56	Mandalay	90,000	
India—				(Saigon .....	.....
<i>British India</i>	1,472,423	252,660,350	171	Calcutta	683,458	
<i>French Possessions</i>	178	276,649	154	Chandernagore .....	.....	Rice, cotton, opium, indigo, jute, flax, tea, silks.
<i>Portuguese Possessions</i>	1,086	444,987	440	New Goa .....	.....	Cinnamon, coffee, coir-stuff, and cocoanut-oil.
Ceylon	24,702	2,758,166	112	Colombo	111,042	No exports.—Caravan trade between India and Persia.
Afghanistan	258,000	4,000,000	15	Kabul .....	.....	(Silk) tobacco, skins, shawls, carpets, attar of roses, opium and wool.
Baloochistan	160,000	2,000,000	12	Kelat .....	.....	Opium, tobacco, oil, attar of roses, dried figs, dates, silk, leather and sponges.
Persia	629,610	7,653,600	12	Teheran	200,000	Coffee, dates, gum-arabic, myrrh, aromatic and medicinal drugs, pearls.
Turkey in Asia	721,798	16,172,000	22	Constantinople	700,000	
Arabia	1,000,000	5,000,000	5	(Muscat	60,000	
				(Mecca	40,000	
TOTAL	15,662,838	756,085,754	48			

GENERAL QUESTIONS.

Commercial.—Which is the largest country of Asia? Which is next? Which two are the most populous? Which country contains the largest city? Which three cities rank next? Which two countries are larger than the Dominion of Canada in extent? What is the eastern coast of Asia noted for? (*Its numerous islands and seas.*) What country is altogether insular? What countries are noted for the production of tea? Silk? Opium? Rice? Cotton? Indigo? Cinnamon? Coffee? Attar of Roses? Figs? Shawls? Carpets? Lacquered ware? Carved ivory? Sago? Tin? Sponges? Aromatic and medicinal drugs? What sea-port is at the mouth of the Canton River? At the mouth of the Yang-tse-kiang? The Ganges? Near the Strait of Bab-el-mandeb? In Ceylon? South of the Malay Peninsula?

Voyages and Travels.—Past what countries and through what waters

would a steamer go from the Mediterranean Sea to Hong-kong? From Bagdad to Bombay? From Calcutta to Singapore? From Bombay to Calcutta? What cities would be passed in sailing from Delhi to Calcutta? What cargo would be carried from Shanghai to Europe? From Calcutta to Hong-kong? From Patna to Calcutta? From Ceylon to Europe? From Singapore? (*Rice.*) From Yokohama to San Francisco? What cities would the caravan route pass between Pekin and St. Petersburg through Maimatchin and Moscow? Between Peshawur and Tiflis? Between Yarkand and Astrakhan?

Rail and Telegraph.—Past what cities would you travel by rail from Bombay to Calcutta? From Calcutta to Madras? By what route would a telegraphic message be sent from Singapore to London? From Singapore to Hong-kong? To Australia?



ANIMALS OF AFRICA.

The clumsy hippopotamus (*river-horse*) is the central figure in the upper part of the engraving. At one time common in all the large rivers of Africa, it is now rare except in solitary regions. It is hunted for its flesh, which resembles pork; for its skin, and for its teeth, formerly much used in the manufacture of artificial human teeth.

The birds about alighting are ibises, anciently held sacred in Egypt as harbingers of plenty, because appearing just before the rise in the waters of the Nile. Equally sacred in the eyes of the ancient Egyptians was the crocodile (shown near the ibis); crocodiles were kept in the temples, fed by the priests, venerated by the people, and after death embalmed and carefully preserved as mummies.

The camel, with its Arab driver, is next represented, but for this animal, which thrives on thistly sand and can travel five or six days without water, the long caravan-journeys across the burning sands of Sahara would be impossible. A camel can carry a load of five hundred pounds thirty miles a day. In the centre of the column a lion has brought down an eland, while other antelopes are escaping on the left; lions are rarer now than formerly, but still have a wide range. Southern and Central Africa abound in different varieties of the antelope, the eland being the largest and most desirable for food. Bounding off on the right is the gnu, a peculiar animal with the head of a bull, the body of a horse, and the legs of an antelope. In the background, ostriches are coursing over the plain in one direction, and a troop of striped zebras in the other.

At the bottom of the column is the sagacious elephant, found from Senegambia to the Orange River. It is larger than its Asiatic kinsman, and never, like him, domesticated and trained, but is hunted for its tusks and flesh, a pair of the former will furnish 125 pounds of ivory. The long-necked giraffe, or camelopard, the tallest of quadrupeds, is browsing on the leaves of trees; and the thick-skinned two-horned rhinoceros is drinking. A young gorilla, on the branch of a tree, completes the picture. The gorilla is the largest of apes. It is found on the west coast of Africa near the equator, and is remarkable for ferocity and strength; according to the French traveller, Du Chaillu, it can crush a musket-barrel with its jaws, and with its hands twist off the trunk of a tree four inches in diameter.

PHYSICAL AFRICA.

I.—GENERAL DESCRIPTION.

Africa is a large peninsula, forming the southern part of the Eastern Continent. It is surrounded on all sides by the Ocean, except where it is connected with Asia by the Isthmus of Suez.

A canal having been cut through this isthmus to connect the Mediterranean and Red Seas, Africa has been thus artificially made into an island-continent. It ranks second in size and third in population among the Grand Divisions.

Africa is the only continent which extends across the whole width of the Torrid Zone, the northern section extending into the North Temperate Zone, and the southern section into the South Temperate Zone.

The **Area** is about 11,500,000 square miles, and the **Population** about 200,000,000, Africa containing about one-half of all the land in the Torrid Zone. It is more than three times the size of the Dominion.

The **Outline**, like that of South America, is very unbroken, and in consequence Africa has a smaller extent of **Coastline** in proportion to its size than any other Grand Division.

The **Rivers** of Africa are few in number, although some are of great length. Except the Nile, they are of little commercial value.

Africa is remarkable for its vast sandy deserts; for the ignorance and barbarism of its inhabitants (chiefly negroes); and for the number, size and ferocity of its animals. The want of facilities for reaching the interior, such as numerous navigable rivers would afford, has been an obstacle to the growth of commerce and to the progress of civilization.

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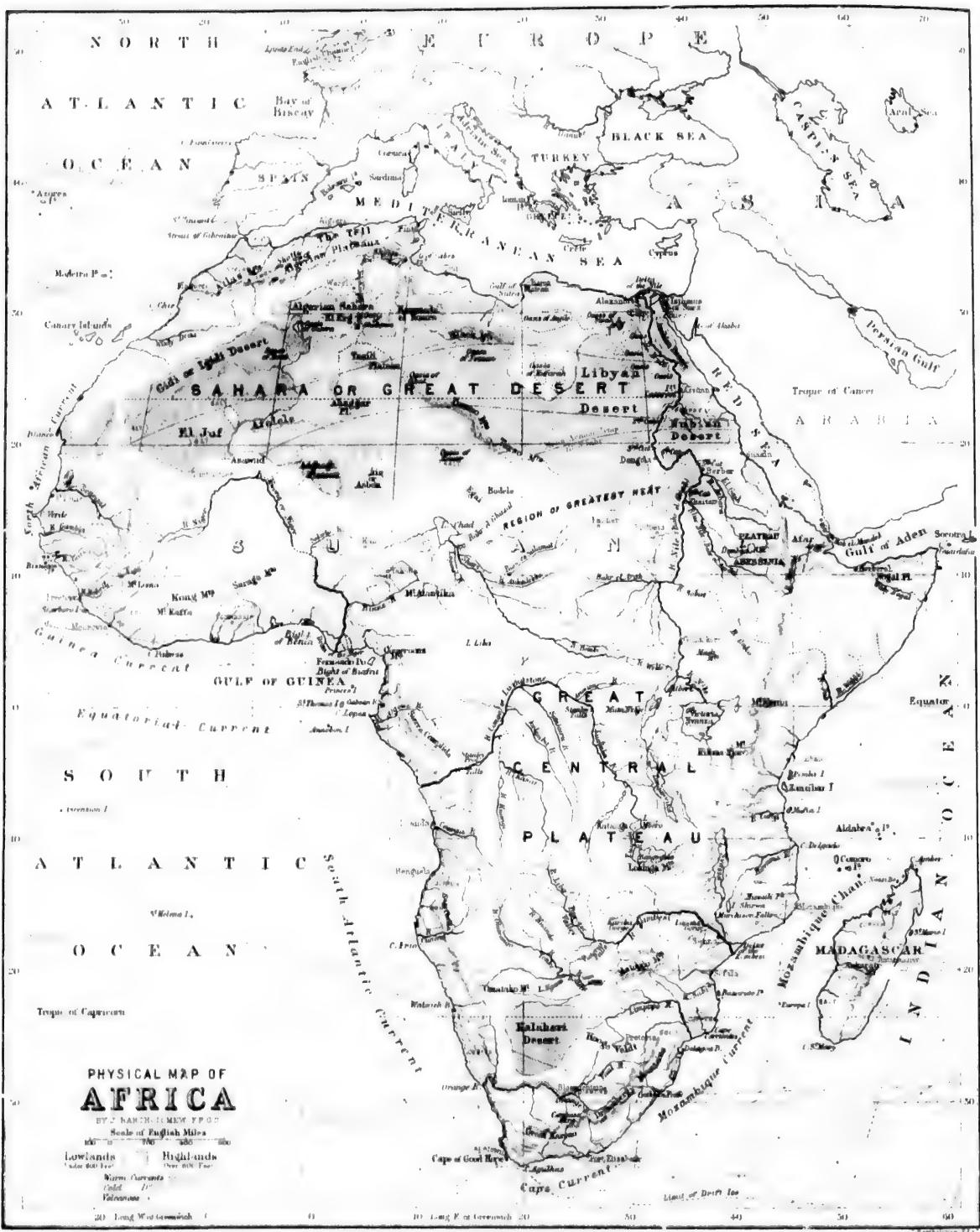
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Outlines.—What sea is north of Africa? What strait connects the gulf on the west? How is it east? How is it Cape of Africa? The cape is near Capetown. On the east coast of islands north of Europe what is the north-west of? Island? What is opposite the Aden? What are north-east of Gaspar? Compare coast-line with South America.

Highlands.—Are the principal lands of Africa mountainous? What mountain range is in the north? In the west? In the south? What are the general directions of the ranges? What is in the eastern part of Africa? What are near the Equator? What is the extent of the Great Central Plateau shown by the course of the rivers? Where are we on this plateau?

**Lowlands and
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II.—QUESTIONS ON THE MAP.

Outlines.—What ocean washes the shores of Africa on the east? On the west? What sea on the north? On the north-east? What Grand Division is north of Africa? Which east? What isthmus connects Africa with Asia? What strait connects the Mediterranean Sea with the Atlantic Ocean? What gulf is on the western coast of Africa? What large island is to the south-east? How is it separated from the continent? What gulf is in the north-east? How is it connected with the Red Sea? Which is the most northerly cape of Africa? The most easterly? The most southerly? What famous cape is near Cape Agulhas? Name the principal capes on the west coast? On the east coast? What solitary islands are west of Africa? What groups of islands north-west? What European islands north-west of Madeira Island? What island is opposite the Gulf of Aden? What islands are north-west of Madagascar? Compare the coast-line with that of South America.

Highlands.—Where are the principal highlands of Africa situated? What mountain range is in the north? In the west? In the east? In the south? What is the general direction of these ranges? What plateau is in the eastern part of Africa? What two peaks are near the Equator? What is the extent of the Great Central Plateau as shown by the courses of the rivers? What lakes are on this plateau?

Lowlands and Drainage.—What great desert is in the northern part? In the north-east? What desert in the south? What great river flows into the Mediterranean? In what lakes does it take its rise? What large rivers flow into the Indian Ocean? Into the Atlantic? What lakes are south of the Equator? What lake is in Soudan? Where do depressions of the land below the level of the sea occur?

Ocean-Currents.—What current flows along the north-west coast of Africa? Along the west coast? Along the east coast? What is their direction?

Geographical Circles.—What geographical circles cross Africa? What lakes does the Equator cross? What circle crosses the Desert of Sahara? In what zone is the greater part of Africa? In what zone is the northern part? The southern part? Through how many degrees of latitude does Africa extend? Through how many degrees of longitude?

Climate and Products.—What is the peculiarity of the Desert of Sahara? (Its immense extent.) What are the principal vegetable products of the north of Africa? Of the Nile Valley? Of the west coast? Of the south? In what part of Africa are the largest wild animals found? Where is the lion

found? The crocodile? The camel? The ostrich? The gorilla? Where are the principal minerals found? What are the chief products of Madagascar?

III.—SURFACE AND DRAINAGE.

Africa, unlike the other Grand Divisions, consists almost entirely of vast plateaus of moderate elevation.

Those of the interior are almost surrounded by a belt of higher plateaus, from parts of which mountain ranges rise, extending parallel to the coast. This elevated margin is in turn bordered on the outside by a narrow plain, skirting the ocean and nearly enclosing the whole Grand Division.

The interior plateau land may be divided into the **Sahara** and the **Great Central Plateau**.

The peculiar feature of the physical geography of Africa is the low plateau of the **Sahara**, or Great Desert, in the north; it occupies about one-fourth of the whole surface, and, in parts, is more than one thousand miles in breadth.

The surface of the **Sahara** is formed mainly of plains of hardened clay and sand, and ridges of granite or sandstone rock. These rocky ridges are bare like the rest of the Sahara, but they enclose small valleys, where streams or springs, derived from rains falling on these elevations, moisten the soil. Extensive areas are covered with loose sand which is drifted by the strong winds into ridges and hillocks.

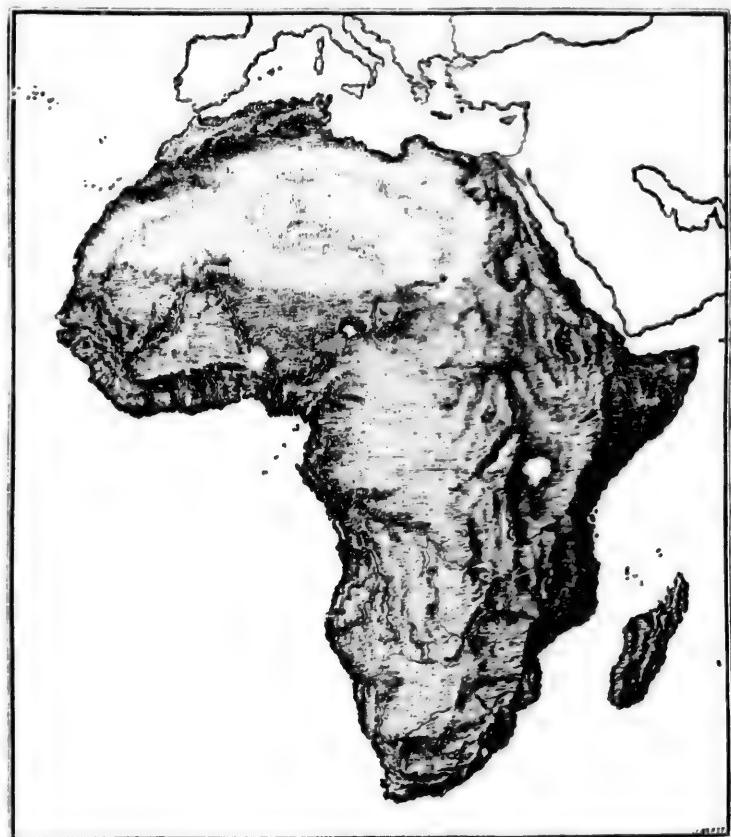
Isolated tracts of fertile land, called **Oases**, occur in this barren waste. These are generally lower than the

surrounding land, and form the only cultivable portions of the Sahara. In the neighborhood of Lake Chad, along the lower Nile, on the north-east coast, and west of the Sahara, are also small lowlands.

South of the Barca Plateau, and also south of the Algerian Plateau, is a depressed region, many portions of which are below the sea-level.

The average elevation of the **Great Central Plateau** in the south and centre is about 4,000 feet, sloping gradually towards the north where it is only about 1,500 feet above the sea.

The **Mountains** of Africa form four systems:—the North-western, the Western, the Eastern, and the Southern.



PHYSICAL VIEW OF AFRICA.

The **North-western** system comprises the **Atlas Mountains**, rich in a variety of valuable but undeveloped minerals, and the **Algerian Plateau**. Extending westward, these mountains originally gave the Atlantic Ocean its name.

The highest known summit of the **Atlas Mountains** is 11,400 feet high, but the average elevation is 7,000 to 8,000 feet. The **Algerian Plateau** averages about 3,000 feet above the sea, and the small **Plateau of Barca** may be considered as a continuation of it.

The **Western** system comprises the **Kong Mountains** north of the Gulf of Guinea, having a mean elevation of about 2,500 feet; and the loftier range of the **Cameroons**, an isolated volcanic group farther east, separated by the valley of the Niger.

The highest summit of the Cameroons is 13,739 feet above the sea.

The **Eastern** system includes the **Mountains of Abyssinia** and the southern extension of the **Abyssinian Plateau**. It contains the highest summits in Africa—**Mt. Kenia** (22,800 feet) and **Kilima-Njaro** (20,000 feet) near the equator.

The **Plateau of Abyssinia**, which has an elevation of 6,000 to 9,000 feet, is the loftiest in Africa. From this a broad strip of lower table-land extends southward along the coast, and is surmounted by short ranges and groups of mountains. It is broken by several depressions, through which rivers make their way to the Indian Ocean.

The **Southern** system embraces the **Nieuvald Mountains**; the **Snow Mountains**; the **Drakenberg Mountains**, and other ranges, rising from a plateau about 5,000 feet high.

The loftiest summit, **Compass Berg**, in the Nieuvald Mountains, is 10,200 feet high.

Africa has fewer volcanoes and is less subject to earthquakes than any of the other Grand Divisions.

The **Rivers** of Africa are not numerous, but three of them rank among the great rivers of the world—the **Nile**, the **Congo**, and the **Niger**; the first is the most important commercially.

The first two derive their waters from the Great Central Plateau, and the Niger from the Plateau north of the Kong Mountains; thence they find their way through breaks in the border swells to the ocean.

The **Nile** is the outlet of the great equatorial lakes **Albert** and **Victoria Nyanza**. It is about 4,000 miles long, and drains a basin of 1,000,000 square miles. For 1,700 miles from its mouth it does not receive a tributary. The navigation of the river is interrupted by a series of cataracts (see Map), but above them boats can ascend for many miles.

The Nile is remarkable for the gradual rise of its waters, beginning every year in June and continuing till the middle of September. Its lower valley becomes inundated, and, on the subsidence of the water, is left covered with a thick layer of fertilizing mud, on which luxuriant crops are raised. The rise of the river, which, near the mouth, is usually not less than forty feet, is attributed to the torrents of water which fall in the upper country during the rainy season.

The **Congo**, 4,900 miles in length, discharges a volume of water far larger than that of either the **Nile** or **St. Lawrence**. Winding the region of equatorial rains, it drains a large basin, abounding in lakes and water courses.

The **Niger** is somewhat larger than the Congo, and ranks third in volume of water, and extent of basin.

The largest river flowing into the Indian Ocean is the **Zambezi**, which drains a large extent of country in the pasture region of South Africa.

The **Orange**, the principal river in the south, is so shallow as to have no commercial importance.

The **Lake Region** of Africa is situated on, or just south of, the Equator. Here, at altitudes of 2,700 to 4,000 feet above the sea, lie the vast bodies of fresh water which feed the great rivers Nile and Congo.

The lakes of this region receive rivers from the Great Central Plateau, as does also **Lake Chad** in Soudan.

The lakes of the Great Central Plateau, **Albert Nyanza**, **Victoria Nyanza**, **Tanganyika**, **Bangweola**, **Nyassa**, and others rival, if they do not surpass the great lakes of North America in size. **Lake Chad**, the great Salt Lake and Lake Titicaca, has no outlet.

IV.—CLIMATE, VEGETATION, ANIMALS AND MINERALS.

Africa is situated almost entirely within the Tropics; the **Climate** is therefore the hottest of any of the Grand Divisions, and in the lowland parts of the coast is very unhealthy.

The Northern Tropic (*Canær*) passes through the centre of the **Sahara**, and the Southern Tropic (*Capricorn*) through the **Kalahari Desert**. Between these desert belts the **Great Central Plateau** forms a broad fertile region, most of it being deluged with tropical rains during several months of the year.

This central part contains the greater part of the population and of the vegetable and animal life in Africa.

A smaller fertile belt is found in the Atlas region and along the coast of the Mediterranean Sea, and another in the extreme southern part of the continent.

The **Great Karroo** in the south is a low plateau similar in character to the llanos and pampas of South America.

The continent, therefore, has **Five Parallel Physical Belts**—three of them broad tracts of fertile land, and two intermediate ones of desert.

The **Region of the Greatest Heat** is in the eastern section of the Sahara and south of it, but does not extend to the equator; there, the dense growth of forest vegetation, supported by the heavy equatorial rainfall, protects the earth from the sun's rays, and the extreme heat is modified.

The **Equatorial Rains** are due to the moist winds from the Indian Ocean, but, between the parallels of 16° and 30° N., the prevailing north-easterly winds, after sweeping across the arid wastes of Asia, are comparatively dry, and what little vapor they retain is at once absorbed by the heated air rising from the parched sands; hence the Sahara is rainless. The **Kalahari Desert** is also without rain, because the easterly winds, before reaching it, expend their moisture on the high border of the plateau which faces the Indian Ocean. The **Scorching Winds** which blow across the Sahara Desert sometimes prove fatal to caravans from the suffocating masses of sand they sweep before them. They are known as the **Simoom** in Africa, the **Sirocco** (when they cross the Mediterranean) in Italy, and the **Harmattan** in Guinea.

In the equatorial regions no high, continuous mountain ranges lie across the course of the winds, and there are but two seasons (see p. 16), the wet and the dry. During the former it rains in torrents for weeks together, and the country becomes flooded, owing to the overflow of the rivers. This is followed by the dry season, in which all but the largest rivers become empty channels, and vegetation is burnt up by the long-continued heat.

Except on the northern coast and in the Great Central Plateau, Africa is almost completely deficient in **Vegetation**.

Where rain falls vegetation is luxuriant, but the tropical forests, though covering a large part of the central belt, are less dense and less extensive than those of South America. Among the most useful trees are the oil-palm of Guinea, the date-palm of the north-west, and of the oases, and the acacia, which supplies the *gum-arabic* of commerce.

Characteristic Features of African vegetation are the baobab trees, some of which are supposed to have attained 4,000 years of age, and in some cases measure twenty feet in diameter—huge cotton trees and mimosas, and majestic palms of nearly a thousand different species. The date palm flourishes in dry tracts where no other tree would live; men, horses and camels live on its fruit, and the natives make a wine out of its sap.

The chief **Products** of Tropical Africa are—palm-oil, cotton, ivory, ostrich feathers, and indigo; of Eastern Africa—coffee, balms, gums, and various aromatics. Northern Africa yields the products of Southern Europe, together with cotton and dates. The dry table-lands of Southern Africa have a scanty vegetation of hard and thorny plants similar to those of the Mexican Plateau of North America.

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The Inhabitants of the Sahara and of
the countries north and east of it are
mostly of the Caucasian race. Arabs and
Berbers or Kabyles—though much darker in
color than the Europeans. South of the
Sahara, the Negro race occupies nearly the
whole continent, and forms much the greater
part of the population of this Grand Divi-
sion. (The animals are shown on p. 98.)

Africa possesses **Minerals** of great value,
but they are comparatively undeveloped.

Gold is found in Senegambia, on the Gambia Coast,
and in the extreme south. Iron, copper, lead and salt
occur in various places. The diamond-fields on the
Orange and Vaal Rivers are the principal sources from
which diamonds are now obtained.

The **Islands** of Africa have a more healthy climate
than the continent, owing to the sea-breezes.

Madagascar, the largest, supplies valuable cabinet
and dye-woods, rice, ginger, pepper, and other tropical
products. **Mauritius** and **Bourbon** are of volcanic
origin, and from their position are subject to terrific
hurricanes; they produce chiefly sugar and coffee.
Madeira is a favorite resort for invalids on account of
its delightful climate. The **Canary** and **Cape Verd**
Islands produce tropical fruits in abundance.

In the engraving above, is re-
presented the process of obtaining
oil from the fruit of the oil-palm
of Western Africa. After its
husky covering is loosened, the
fruit is thrown into vats full of
water, and negro women tread out the oil.

The natives call the oil-palm their *Friend*. They
use the oil as butter, and make from different parts of
the tree various utensils and articles of dress. The
palm-oil of commerce is used in the manufacture of
perfumery, soap, and candles, and for lubricating
machinery.

Another valuable tree is the date-palm of Northern
Africa. In Egypt, the harvest of its delicious fruit is
celebrated every year with feasting and merry-making.
It furnishes timber, thatch, materials for cordage, &c.
In Madagascar, the Rufia-palm is no less useful. From
the inner fibres of its leaves cloths are woven.

From the branches of the acacia, whose delicate
leaves and blossom are shown above, gum-arabic
exudes; and senna (cassia-leaves) is used as medi-
cine. Peanuts are raised in large quantities on the
western coast.

Among the characteristic Egyptian plants is the
lotus, a beautiful water-lily, the roots and seeds of
which are eaten. The papaya formerly abounded
on the banks of the Nile, and still grows in Abyssinia.
It is from this plant that *paper* gets its name, the paper
of antiquity having been prepared from its inner bark.

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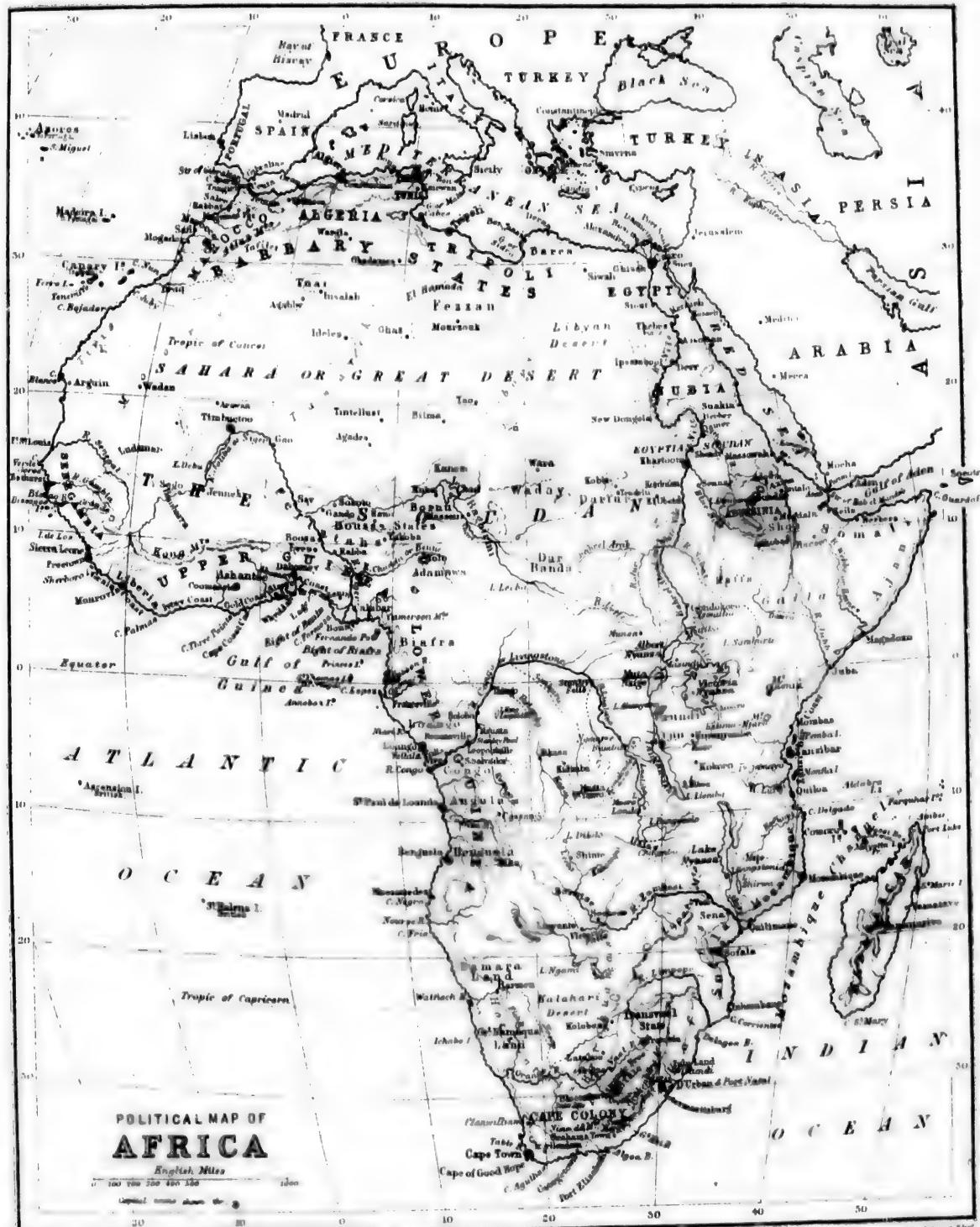
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Other races now predominate, of which the principal are—the **Moors**, in or near the towns; the **Arabs**, who are chiefly nomads; the **Turks**, from Asia, and the **French**, who have colonized Algeria; all but the last are Mohammedans.

The fertile valleys and slopes of the Atlas Mountains are called the "Tell" or grain country. South of the Tell is the **Sahara**, or "Country of Oases," where the date-palm abounds.

The name "**Sahara**" is also given by geographers to the Great Desert occupying a large part of northern Africa. Some of the oases are of great extent, are permanently inhabited, have their grain-fields, date-groves and orchards, and contain villages and towns of several thousand inhabitants.

The date is the great staple of the plains south of the Atlas and of Tripoli and Barca. So abundant are the date-groves in the oases that this entire region is frequently called "**The Land of Dates**," though this name is more especially applied to the low plains or Sahara of Southern Algeria.

The **Products** of the Atlas Region are mainly wheat, corn, and other grains, and fruits—especially dates, olives, figs, and pomegranates. The chief **Exports** are—grain, olive-oil, dates, wool, hides, esparto grass, and skins.

Marocco derives its name from the Moors.

It is a semi-barbarous country, inhabited by a number of tribes governed by a **Sultan**, whose authority is, however, little respected.

Marocco has three capitals:—**Fez**, the residence of the Sultan, and the western depot of the caravan trade between Europe and Central Africa; **Mequinez**; and **Marocco**, the old metropolis.

Algeria is a Province of France.

Europeans form but a small part of the population, and are mostly in the sea-port towns. The rest of the inhabitants are about equally divided between the Berbers of the Tell and the Arabs of the Sahara.

Algiers is the capital. **Constantine** and **Oran** are places of some commercial importance.

Tunis, **Tripoli** and **Barca** are unimportant states, and are dependencies of the Turkish Empire. **Fezzan** is a dependency of Tripoli.

Tripoli, the capital of Tripoli, has a large caravan trade with Central Africa through **Mourzouk** in Fezzan, and by the other lines of oases across the Sahara. The other towns are unimportant.

THE NILE REGION—EGYPT & ABYSSINIA.

Egypt and its dependencies, **Nubia**, **Darfur**, **Kordofan**, and the Egyptian districts of **Soudan**, occupy the narrow Valley of the Nile from the Equator to the Mediterranean Sea. They form a part of the Turkish Empire.

The **Government** is a monarchy, but is not independent, as the ruler, called the *Khedive* (*Kay'-dee-vay*), pays a tribute to the Sultan of Turkey.

The heavy tropical rains in Abyssinia and farther south cause the lower Nile to overflow its banks annually from June to September (see p. 100). A belt of lowland from one to ten miles wide along the banks of the Nile is thus alternately a continuous lake, and a broad green ribbon of grain and cotton. No rain falls in lower Egypt except near the Mediterranean.

The **Delta of the Nile** is about ninety miles in its greatest extent from north to south, and about eighty miles in breadth along the Mediterranean coast. Owing to the annual inundations, this is one of the most fertile regions on the globe.

This remarkable valley was for thousands of years the seat of a powerful empire, famous for its wealth, industry, learning, and skill in the arts. The pyramids and temples of ancient Egypt have been preserved by the dry climate, and are the most stupendous and magnificent ruins in the world.

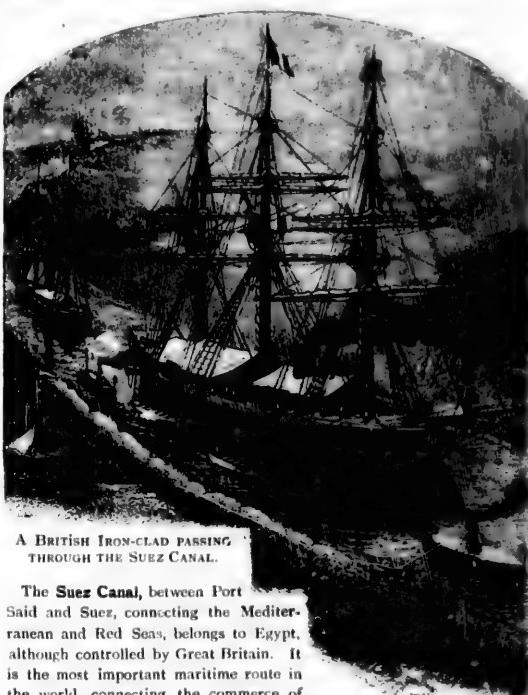
Egypt is by far the most important country of Africa. It is

the only one, excepting the British Colonies, which resembles Europe in its manufactures, agriculture, education, railways, telegraphs, and in the organization of its army and navy.

The region west of the Nile forms part of the **Libyan Desert**, and is uninhabitable, except in the *Wadis* or valleys, which, being fertilized by springs, contain beautiful oases. East of the Nile is the **Nubian Desert**, sparsely inhabited by wandering herdsmen. In **Kordofan** and towards the south the tropical rains render the soil fertile and the vegetation luxuriant.

The **People** are chiefly of Arab descent. Some belong to the **Berbers** and other African tribes, and a small number are **Copts**, descendants of the ancient Egyptians. The **Turks** are the ruling race, and Mohammedanism is the prevailing religion.

Agriculture is the principal occupation of the people. The chief **Exports** are grain and cotton.



A BRITISH IRON-CLAD PASSING THROUGH THE SUEZ CANAL.

The **Suez Canal**, between Port Said and Suez, connecting the Mediterranean and Red Seas, belongs to Egypt, although controlled by Great Britain. It is the most important maritime route in the world, connecting the commerce of Europe with that of southern and eastern Asia. The total length of the canal is about one hundred miles.

A railway connects Alexandria, Cairo, and Suez, and forms an important link in the overland route between Great Britain and India.

Cairo, the capital of Egypt, is the largest city in Africa. **Alexandria** is the second city and the principal sea-port. **Port Said** and **Suez** are towns at the ends of the Suez Canal. **Khartoom** is the capital and centre of trade of Nubia; **El Obeid** is the chief place of Kordofan, and **Kobbe** of Darfur.

Abyssinia is the most elevated country in Africa. It is an elevated plateau, ridged by rugged mountains, between which are fertile valleys with luxuriant vegetation.

Many of its mountain peaks are covered with snow during the greater part of the year.

The country is in a semi-barbarous condition, and has little or no **Commerce**. It is in the possession of several independent tribes, whose rulers are constantly struggling for supremacy.

Coffee is indigenous to this region, and from here it was introduced into Arabia.

The chief **Exports** are coffee, ivory and gums, which are sold principally to the Egyptians at Massowah on the Red Sea.

THE SAHARA, or GREAT DESERT.

The **Sahara** is the most extensive desert on the earth. It forms the western portion of the great desert belt which extends across the Eastern Hemisphere from the Atlantic Ocean through Africa and Asia to the Pacific.

It consists of rocky plateaus and isolated low mountain ridges, separated by broad tracts of gravel and shifting sand. Some rain falls during certain seasons of the year in the mountain regions, and in the low and moist spots **Oases** are formed.

All the trade is carried on by means of caravans of camels. A central **Series of Oases** from Tripoli through Ghadames, Ghat, and Mourzouk in Fezzan to the plains about Lake Chad, form the principal caravan routes. Others lead from Timbuctoo to Morocco, and from Kobbé in Darfur to Egypt. An annual fair is held at Ghat, where sometimes as many as 30,000 camel-loads of goods are collected.

This central line divides the Sahara into two parts. The Western, called the **Sahel**, or plain, is sandy, and has few oases; it furnishes Soudan with salt. The Eastern is the **Libyan Desert**, and contains many oases. East of the Nile is the **Nubian Desert**.

The **Population** of the Sahara is very sparse. The inhabitants are wandering tribes of Arabs, Moors, Tawards and Tibboos, and are similar in their habits to the Bedouin Arabs.

SOUDAN.

Soudan, or Land of the Blacks, is the general name applied to the broad fertile belt crossing the continent immediately south of the Great Desert, and forming a transition between the desert and the luxuriant vegetation of the equatorial latitudes.

In its heavy tropical rains, extensive forests, fertile soil and great heat, Soudan somewhat resembles the selvas of the Amazon.

A large caravan trade from the interior to the Mediterranean coast is carried on, the principal **Exports** being gold, ivory, ostrich feathers and gum-arabic.

Soudan contains a large number of independent, populous semi-barbarous States.

In Central and Western Soudan the inhabitants are chiefly negro tribes, who are the highest of their race in civilization. In Eastern Soudan the ruling class is of Arabic descent.

Most of the **Inhabitants** are Mohammedans; the rest are Pagans.

The religion of the Pagan negroes combines a belief in evil spirits, witchcraft, and magic charms, and is known as "Feticism."

The principal States are **Bambarra**, the **Houssa States**, or Country of the Fellatahs, **Bornu** and **Baghirmi** round Lake Chad, and **Waday**, besides **Egyptian Soudan**; the principal towns—**Kano**, **Sokoto**, **Kuka** and **Timbuctoo**.

CENTRAL AFRICA.

A line of **European Colonies** and **Trading-posts** extends, along the west coast of Africa, from Cape Verd to the British Colonies at the Cape of Good Hope, and thence along the eastern coast to Mozambique.

North of the mouth of the Orange River the west coast for seven hundred miles is entirely desert, and the interior of the Great Central Plateau south of Soudan to the Zambesi River is but little known.

The best known portion of the country is the **Zambesi Basin**, which has been explored by Livingstone and others.

The large fresh-water lakes near the equator form a notable feature of this part of the country, and the **Victoria Falls** on the Zambesi River are exceeded in grandeur only by those of Niagara. In the extreme south is the **Kalahari Desert**, similar in character to the Sahara.

The **People** are barbarous and live in small villages called **Kraals**. They subsist chiefly on their flocks and herds, and cultivate the soil to a very moderate extent. The more powerful tribes are constantly preying upon their weaker neighbours.

Ivory and ostrich feathers are the principal articles of commerce.

COUNTRIES OF THE WEST COAST.

The **Countries of the West Coast** comprise Senegambia, Liberia, Upper and Lower Guinea, with numerous European settlements.

Senegambia is the general name given to the coast region between the western part of the Kong Mountains and the Sahara, drained by the Senegal and Gambia Rivers.

It consists of low, sandy, coast-plains, fertile alluvial bottoms, and table-lands, rich in forests and prairies.

The **Exports** are ivory, bees-wax, gums, hides, and gold.

The **Inhabitants** are mainly negroes.

Liberia is a republic, with a constitution modelled on that of the United States. It is peopled mainly by American negroes, formerly slaves, for whose benefit the colony was originally established.

The country is productive, yielding large harvests of cotton, coffee, indigo and sugar-cane.

Monrovia is the capital.

The coast regions from Cape Palmas to Cape Frio are known as **Upper** and **Lower Guinea**.

They are renowned for their natural wealth in vegetable and mineral products; and are also notable for the injurious effects of their climate upon white people.

The coasts of Upper Guinea are known as the **Grain, Ivory, Gold, and Slave Coasts**, from their principal exports.

Upper Guinea is divided into a great number of negro kingdoms, all of which are in a very low state of civilization. **Ashantee** and **Dahomey** are the principal.

Some of the towns are large and populous, as **Coomassie**, **Abomey** and **Abbeokuta**. A considerable caravan trade is carried on with Timbuctoo, Sokota, Kano and Kuka.

Lower Guinea, with the exception of Loango, is nominally subject to the Portuguese, who have trading stations on the coast.

From Cape Frio to the Orange River the country is in the possession of uncivilized native tribes, and is almost unknown.

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The **British Settlements** on the west coast of Africa are—**Sierra Leone**, a colony peopled chiefly by negroes, taken from slave-traders captured by British cruisers; **Freetown** is the capital. **Bathurst**, on the Island of St. Mary at the mouth of the Gambia. **Gold Coast Colony**, including **Lagos**, in the Gulf of Guinea; **Accra** is the capital.

The **Portuguese Settlements** are—**Bissau**, on the Rio Grande, and other small settlements in Senegambia, and **Angola** (including the districts of Luanda, Benguela and Mossamedes) in Lower Guinea, of which **St. Paul de Loanda** is the chief town.

France has trading stations on the Senegal, the principal one being **Fort St. Louis**, at the mouth of the river, also on the **Gold Coast** and on the **Gaboon River** in Lower Guinea.

Spain possesses the small territory of **San Juan** on the coast of Guinea.

SOUTHERN AFRICA.

Southern Africa belongs chiefly to Great Britain. In the extreme south is **Cape Colony** with its provinces, and east of that is **Natal**.

North-east of Cape Colony are the independent **Dutch Republics** of the **Transvaal** and the **Orange River States**.

Adjacent to Natal are territories still occupied by their native inhabitants—the **Kaffirs**, **Basutos** and **Zulus**—under the government of hereditary chiefs; and west of the Transvaal State are the **Bechuanas**, **Namaquas**, and other native races.

The **Native Inhabitants** are generally herdsmen, owning large numbers of sheep, cattle and horses, which constitute their chief wealth; they are tall, well-formed and intelligent, and are making some progress in civilization. The natives of the extreme south, called **Hottentots**, are a stunted race of blacks, of a low class in intelligence. The Europeans and their descendants form a large proportion of the population; they are either British or Dutch.

CAPE COLONY.

Cape Colony is the most important British Colony in Africa. It includes the adjoining territories of Basutoland, Transkei (beyond the Kei (*Ky*) River) or Kaffraria, and Griqualand.

Except in limited regions near the coasts and rivers, the land is not well suited to agriculture; but there are large areas of valuable pasture ground. The chief **Industry** of the country is the raising of sheep, cattle, and ostriches.

An extensive **Diamond Region**, from which large numbers of valuable gems are obtained, exists on the middle and lower course of the Vaal River, the main tributary of the Orange.

The chief **Exports** are wool, wine, ostrich feathers, and diamonds. The trade is chiefly with Great Britain.

Cape Town, the capital, is a place of great commercial importance, being the stopping-place for vessels trading round the Cape of Good Hope. It is connected by nearly 1,000 miles of railway with towns on the coast or in the interior. These are, however, of small size and importance.

NATAL.

The soil of **Natal** is more generally fertile than that of Cape Colony, as numerous small streams run through the country into the Indian Ocean; a rich coal-field has been discovered near the coast.

The chief **Exports** are wool, sugar, coffee, cotton, and arrow-root. Tobacco, and the different grains and fruits of the temperate zone, are also cultivated.

Pietermaritzburg is the capital, and **D'Urban** the principal sea-port.

DUTCH STATES.

The **Transvaal Republic** and the **Orange River State** are peopled by Dutch farmers (*Boers*), descendants of the original colonists who came from Holland to the Cape of Good Hope, and afterwards migrated into this region.

The **Transvaal Republic** was formerly a part of Cape Colony, but in 1881 its independence was guaranteed by Great Britain, the latter only reserving a suzerainty in foreign affairs.

These countries are not favorable for agriculture, but afford good pasture. The rearing of sheep, cattle and horses is the chief **Industry** of the people. The **People** belong to the Dutch-Reformed Protestant Church.

Pretoria is the capital of the Transvaal State, and **Bloemfontein** (*Bloum-fon-tine*) of the Orange River State.

COUNTRIES OF THE EASTERN COAST.

The **Eastern Region** of Africa may be generally divided into three territories:—the **Somali** and **Zanzibar Territories**, and the **Portuguese Settlements**.

The **Coast Region** from the Strait of Bab-el-Mandeb to Cape Delgado is occupied by independent native tribes—chiefly pastoral—with a considerable Arab population in the towns on the coast and islands.

The Sultan of Zanzibar claims a protectorate over the coast countries from Cape Delgado to Magadao. North of that is claimed by the Sultan of Oman, in Arabia.

The principal towns are: **Berbera**, in Somali, and **Zanzibar**, **Mombas** and **Quiloa** on the Zanzibar coast.

The Islands of **Zanzibar** and **Pemba** are among the most fertile regions of the globe, and yield large quantities of sugar and rice.

The chief **Exports** of the coast are rice, sugar, molasses and fish.

The **Portuguese Possessions** extend from Cape Delgado to Delagoa Bay and include the territories of **Sofala** and **Mozambique**. The principal town is **Mozambique**.

AFRICAN ISLANDS.

Madagascar is one of the largest islands on the globe, being more than twice the size of the Province of Ontario.

The **Soil** is fertile, with rich pastureage, and magnificent forests, abounding in valuable trees and medicinal plants. The principal **Products** are—rice, sugar-cane, tobacco, manioc, and all the fruits of tropical regions. Copper, mercury, iron and coal are known to exist, and gold and silver are also found.

The chief **Exports** are rum, rice, and cattle, and the trade is mainly with Mauritius and with the French islands of Ste. Marie and Bourbon.

The **Inhabitants** are partly Malays and partly a mixed race, closely resembling the people of the adjacent coasts of the mainland. Of late years they have made considerable progress in civilization and Christianity.

The **Government** is a despotic monarchy.

Tananarivo is the capital and largest city. **Tamatave**, the chief port, exports cattle and rice.

Mauritius belongs to Great Britain, and exports sugar. It is a stopping place for vessels crossing the Indian Ocean. (See *Commercial Map of the World*.) **Port Louis** is the capital.

The **Seychelles Islands**, **Rodriguez**, and a number of small islands adjacent are dependencies of Mauritius.

Bourbon, or Reunion, as it is also called, is a French colony. Near Madagascar are the Islands of **Ste. Marie**, **Mayotta** and **Nossi-Be**, also belonging to France.

The **Atlantic Islands** are of small size, and are precipitous, volcanic rocks.

The solitary islands, **St. Helena**, **Ascension** and **Tristan da Cunha** belong to Great Britain. The **Cape Verd Islands** and **Madeira** belong to Portugal, and the **Canary Islands** to Spain. The latter export wine, sugar and coffee.

In the Gulf of Guinea, the Islands of **Fernando Po**, and **Annonbo** belong to Spain, and the Islands of **St. Thomas** and **Princes** to Portugal.

Socotra, west of Cape Guardafui, is under the control of the Imam of Muscat, and **Zanzibar** contains the chief town of the Zanzibar coast.



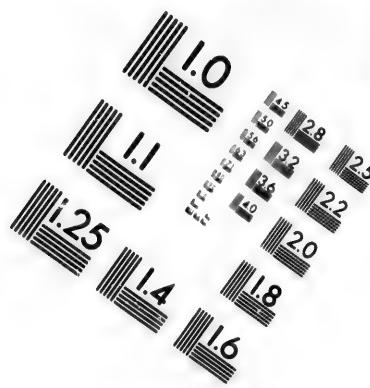
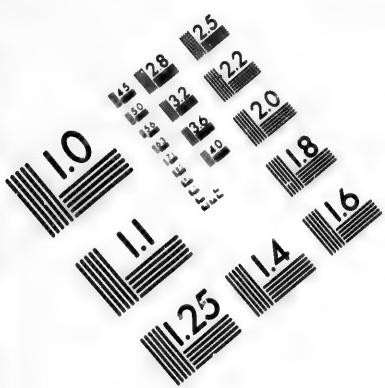
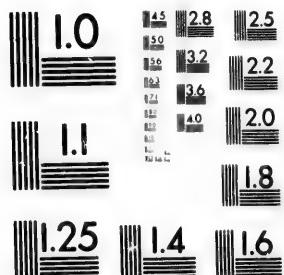
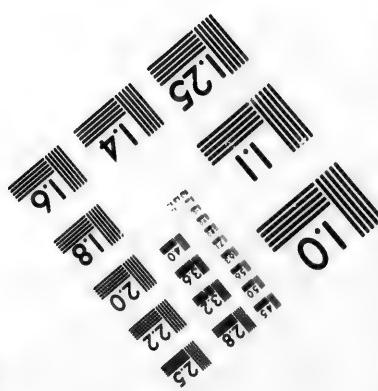


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POLITICAL AFRICA.

AFRICA—STATISTICAL REFERENCE TABLE.

STATE.	AREA IN SQ. MILES.	POPU- LATION. (Estimated.)	PERSONS TO A SQ. MILE.	CAPITAL.	POPU- LATION.	PRINCIPAL EXPORTS.
Barbary States —						
Marocco.....	310,300	6,140,000	20	Fez.....	100,000	
Algeria (<i>French</i>).....	164,260	2,867,626	17	Marocco.....	50,000	Wheat, olive-oil, dates, wool, hides, esparto-grass, and skins.
Tunis.....	45,229	3,000,000	66	Algiers.....	64,714	
Tripoli and Barca.....	394,710	1,010,000	2½	Tunis.....	125,000	
Egypt	1,141,034	16,100,000	15	Tripoli.....	25,000	
Abyssinia.....	158,000	3,000,000	20	(Cairo (<i>Capital</i>)).....	327,462	
The Sahara.....	2,500,000	100,000	.....	(Alexandria (<i>S.-pt</i>)).....	165,752	
Soudan.....	2,500,000	70,000,000	24	Gondar.....	7,000	Wheat and cotton.
Central Africa.....	2,000,000	90,000,000	45	.....	.....	Coffee, ivory, gold-dust, musk, and gums.
Western Africa—				.....	.....	Gold, ivory, ostrich feathers, and gum-arabic.
Senegambia.....	135,000	300,000	1½	Monrovia.....	.....	Ivory and ostrich feathers.
Senegal (<i>French</i>).....	75,500	107,431	2½	Coomassie.....	.....
Sierra Leone and Gambia (<i>British</i>).....	537	74,606	140	Abowey.....	.....
Liberia.....	50,000	1,500,000	306	St. Paul de Loanda.....	.....	Ivory, bees-wax, gum-copal and other gums, palm-oil, hides, and gold.
Ashantee.....	75,000	3,000,000	40	.....	.....
Dahomey.....	14,300	200,000	14	Accra.....	.....
Guinea Coast—				.....	.....
Portuguese Possessions.....	309,643	2,034,819	66	.....	.....
Gold Coast and Gaboon (<i>French</i>).....	1,072	3,000	3	.....	.....
Gold Coast and Lagos (<i>British</i>).....	6,073	483,340	80	.....	.....
Southern Africa—				.....	.....
Cape Colony (<i>British</i>).....	244,750	1,364,154	6	Capetown.....	45,260	
Natal (<i>British</i>).....	18,750	413,167	22	Pietermaritzburg.....	10,144	Wool, wine, diamonds, ostrich feathers, sugar, coffee, and arrowroot.
Orange River State.....	41,062	133,518	3	Bloemfontein.....	2,567	
Transvaal State.....	114,360	700,000	6	Pretoria.....	.....
Eastern Africa—				.....	.....
Portuguese Possessions.....	378,619	350,000	1	Mozambique.....	.....
Zanzibar.....	397,500	800,000	2	Zanzibar.....	30,000	Sugar, rice, and molasses.
Somali, etc.....	392,000	250,000	.....	Berbera.....	.....
African Islands—				.....	.....
Madagascar.....	226,130	3,500,000	15	Tananarivo.....	75,000	
Mauritius (<i>British</i>).....	713	377,373	539	Port Louis.....	65,500	Cattle, rice, sugar, rum, tobacco, manioc.
French Possessions.....				.....	.....
Bourbon (<i>Reunion</i>).....	929	103,362	200	.....	.....
Mayotta.....	135	12,000	90	.....	.....
Nossi-Bé.....	108	10,150	100	.....	.....
Ste. Marie.....	64	7,135	111	.....	.....
British Possessions.....				.....	.....
St. Helena.....	47	5,059	107	.....	.....
Ascension.....	34	27	.....	.....	.....
Tristan da Cunha.....	45	105	.....	.....	.....
Portuguese Possessions.....				.....	.....	Fruit.
Cape Verd Islands.....	1,471	99,317	7	.....	.....
St. Thomas.....	360	18,372	51	.....	.....
Principe.....	58	2,605	46	.....	.....
Spanish Possessions—				.....	.....
Fernando Po.....				.....	.....	Palm-oil, bees-wax, gums.
Annonbo.....	853	35,000	40	.....	.....
Territory of San Juan.....				.....	.....
TOTAL	11,568,676	208,482,316	20	.....	.....

GENERAL QUESTIONS.

Commercial.—Which is the most populous district of Africa? Which ranks next? Which country contains the largest population? What three states on the Mediterranean exceed Ontario in population? What island in the Indian Ocean? What British colony has about the same population as the Province of Quebec? What island in the Indian Ocean exceeds New Brunswick slightly in population? Which country contains the two largest cities? What countries are the two next largest?

What are the chief exports of Northern Africa? Of Southern Africa? Of Eastern Africa? Of Soudan? Of Central Africa? Where are diamonds procured? From what islands is sugar exported? Fruit? Rice? Molasses? Where are ostrich feathers procured? Ivory? Dates? Coffee? Musk? Gold-dust? Bees-wax? Gum-copal? Wool? Wine? Wheat? Cotton? Esparago-grass? Palm-oil?

What European countries have possessions or colonies in Africa? Where are the principal British colonies in Southern Africa? In Western Africa?

What French colony is on the Mediterranean? What other colonies has France? Where are the Portuguese Possessions situated? The Spanish Possessions? What islands belong to Great Britain? To France? To Spain? To Portugal?

Voyages.—What cargo would a vessel carry from Cape Town to London? From Mauritius to Montreal? From Zanzibar to Aden? From the Cape Verd Islands to Lisbon? From Madagascar to Mauritius? From Sierra Leone to Liverpool? From Alexandria to Marseilles? From Algiers to Quebec? From Bourbon to Havre? From St. Paul de Loanda to Lisbon?

If a vessel leaves Halifax for Natal, through what waters and past what islands would she sail? What African countries would be passed in sailing from the Strait of Gibraltar to Alexandria? From Alexandria (*through the Suez Canal*) to Madagascar? From Tamatave to Sierra Leone? From Sierra Leone to Lisbon?



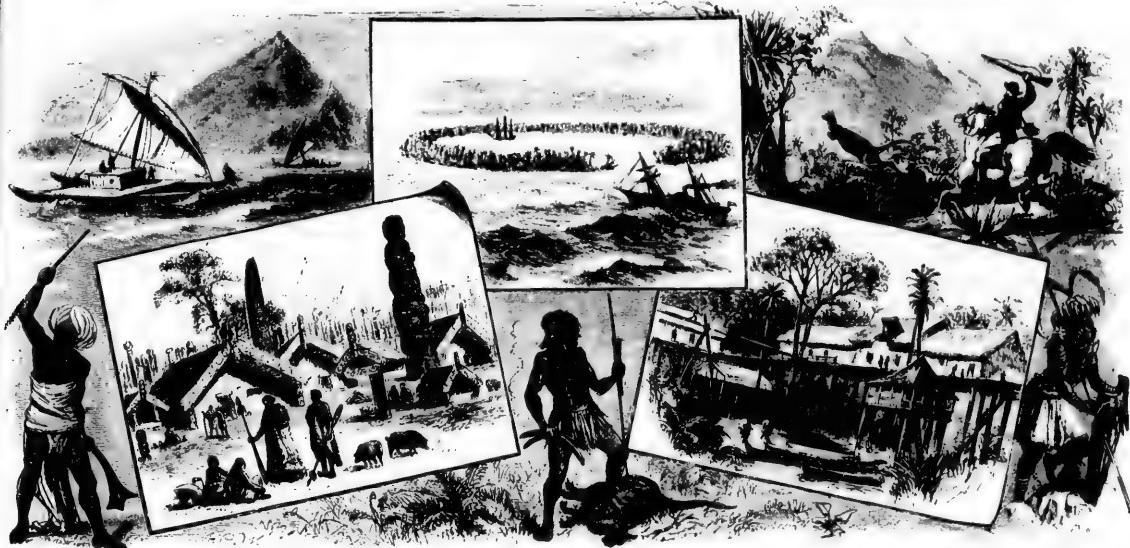
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COAST OF NEW GUINEA.
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SCENES IN OCEANIA.

OCEANIA.

GENERAL DESCRIPTION.

Oceania, the sixth Grand Division, is composed of the numerous islands situated in the Pacific Ocean (*see Map of Western Hemisphere*), and between the Pacific and Indian Oceans south of the Tropic of Cancer. Together, these islands form an Area one-sixth larger than the Dominion of Canada and a little larger than Europe. Oceania ranks fifth both in extent and population among the Grand Divisions.

Oceania includes the **Largest Islands** in the world—**Australia**, **New Guinea**, **Borneo**, and others—and a vast number of small islands. Some are of volcanic formation, and contain active volcanoes—as **Java**, **Sumatra**, and the **Philippine Islands**. Others are of coral formation; and many of the volcanic islands are surrounded by coral reefs, dangerous to navigation.

In 1883, an earthquake in Java destroyed an immense amount of property, and 30,000 lives were lost.

Coral Reefs and the foundations of coral islands are composed of the skeletons of minute marine animals called **Polyps**, myriads of which inhabit the tropical seas. These polyps secrete, from the sea-water in which they live, a limy substance, which serves them as a skeleton, and which is called **Coral**. They multiply rapidly, not only by eggs but by budding like plants; and out of the skeletons of successive generations masses of rock grow up by degrees to the surface of the sea.

Here the reef stops, for the polyps cannot live out of the water;

but in some cases, under the action of the waves and from other causes, the upper parts of the structure are broken up into small fragments; these are washed up on the top of the reef and gradually form a soil.

Seeds are carried thither by the ocean currents or by birds; and under the influence of a warm and moist climate, vegetation soon crowns the newly-formed island, of which the majestic cocoa-palm becomes a characteristic ornament.

Thus are formed **Coral Islands**, particularly numerous in the Pacific and Indian Oceans. They seldom have an elevation of more than ten feet above the sea, and are usually circular in form. In many cases they consist of a ring encircling a central lagoon, or portion of the ocean; vessels enter through a passage in the ring, and find a secure harbor within. Such islands are called **Atolls**. (*See engraving above.*)

Coral islands often form extended archipelagoes. The **Caroline Islands**, for instance (*refer to the Map and describe their situation*), embrace no less than sixty groups of *Atolls*, scattered along a distance of twelve hundred miles.

Long coral reefs sometimes run parallel to the coasts of the islands. The **Great Barrier Reef**, on the north-eastern coast of Australia (*see Map*), rises from a very great depth, and is more than a thousand miles in length. Against this wall of coral the breakers dash with tremendous force, with the roar of thunder, and form a continuous cataract of foam.

The **Natives of Oceania** belong chiefly to the Malay race, but the Papuans and native Australians have more Negro than Malay characteristics, and are of the most degraded class. The greater number are Pagans, but some are Mohammedans and some have been Christianized.

The islanders generally are fond of the sea and are good sailors. Some of them are gentle and intelligent, and have made considerable progress in civilization, tilling the soil and displaying skill in various manufactures. Others are treacherous and revengeful cannibals. Piracy is not uncommon.

Oceania consists of **Four Divisions:**—

1. Malaysia, the Indian or Malay Archipelago, includes Sumatra, Java, Borneo, and the islands lying between Asia on the north-west, and Australia and New Guinea on the south-east.

QUESTIONS ON THE MAP.

(See also *Physical Maps of the Hemispheres*.)

General.—Of what is Oceania composed? In what oceans are the islands of Oceania? What continent is north-west of the principal islands? What island-continent is in the south? Into what general groups of islands is Oceania divided? What is the position of Malaysia? Of Melanesia? Of Australasia? Of Polynesia? What sea is between Malaysia and Asia?

Malaysia.—Which are the chief islands of Malaysia? Which is the largest? What is the southern group called? To what European power does Java and part of Sumatra belong? What is the principal city of the Dutch East India possessions? Where is it situated? Name three sea-ports in Sumatra. What two sea-ports are in Java besides Batavia? How is Java separated from Sumatra? From Borneo? Sumatra from the Malay Peninsula? Where is Banca situated? For what metal is it celebrated? What small island in the south of the Strait of Malacca belongs to Britain? (See p. 93.) What large city is on it? What group of islands is north-east of Borneo? How are they separated from Borneo? Which are the chief islands? To what European power do they belong? What is the chief city? On what island?

What island is east of Borneo? To what European power does Celebes belong? What is its chief town? What group of islands is north-east of Celebes? To what European power do they belong? For what are they celebrated? Which is the largest island? How are the Moluccas separated from Celebes? Celebes from Borneo? To what two European powers do parts of Borneo belong? What are the three principal parts?

What seas are in Malaysia? What straits? In what zone is Malaysia? What islands are crossed by the equator? Which islands are mountainous? On which are volcanoes?

Melanesia.—Which is the largest island? What sea and strait separate New Guinea from Australia? What two large islands are east of New Guinea? What archipelago south-east? What group is south-east of New Britain? What large island is in the extreme south-east? To what European power does New Caledonia belong? What group of islands is north-east of New Caledonia? What sea is between New Guinea and New Caledonia?

Australasia.—Which are the chief islands of Australasia? Which is the largest? What group is in the south-east? What large island lies south of Australia? To what European power do the islands of Australasia belong? What sea is on the north-east of Australia? Between Australia and New Zealand? What strait is between Australia and Tasmania?

What ocean is on the west of Australia? What gulf on the north? On the south? Where is the Great Barrier Reef? Which is the most northerly cape? North-western? Western? South-western? South-eastern? What are the principal mountains? Where are they situated? Name the chief river. Its tributaries. What is the general direction of their course? What lakes are in Australia? Where are they situated? In what zone is the northern part of Australia? The southern? What Tropic crosses it near the middle?

How is Australia divided? What divisions are in the east? The centre? The west? What colonies does Victoria border on? What river forms part of its northern boundary? What mountains are in the north-east? What city is the capital? What sea-port is south-west of Melbourne? What city is north of Geelong? North of Ballarat?

What colonies does New South Wales border on? What are its chief rivers? Into what river do they flow? What mountain range extends from Victoria into New South Wales? What other mountains are in New South Wales? What city is the capital? What town is near Sydney on the west? What sea-port north-east? What town is south-west? North-east of Newcastle?

What colonies does Queensland border on? What is the capital and chief sea-port? What town is north of Brisbane? What town is north of Maryborough on the Fitzroy River?

2. Melanesia includes New Guinea and the islands east and south-east to New Caledonia.

3. Australasia includes Australia, Tasmania, New Zealand, and the adjacent islands.

4. Polynesia comprehends the vast number of islands scattered over the Pacific Ocean, south of the Tropic of Cancer, which are not included in the above divisions.

What colonies does South Australia border on? What gulfs are south of it? What territory is north? What ranges of hills are in the south? What lakes are in South Australia? What island is to the south? What is the capital?

What colonies does Western Australia border on? What ocean is on the west? What hills are in the south-west? What is the capital of Western Australia? What port is south-east of Perth on King George's Sound?

What colony is south of Victoria? What islands are between Tasmania and Victoria? What cape is on the south? What city is the capital? What city is north of Hobart? Name the chief islands of New Zealand. What two straits separate them? What cape is on the north? On the east of North Island? What island is to the south of South Island? To the west? What mountains are in South Island? Which island has a number of volcanoes? What city is the capital of New Zealand? On what island? What city is in the north of North Island? What city is in the south-east of South Island? In what zone is New Zealand?

Polynesia.—In what ocean are the islands of Polynesia situated? In what zone are most of the islands? Which groups are north of the Equator? What groups south? What principal group is in the north-east? What is the capital? What volcano is on the Island of Hawaii? To what group does Tahiti belong? To what European power does it belong? To what European power do the Feejee Islands belong? The Marquesas Islands?

REVIEW EXERCISES.

Colonies, etc.—Where is it? How bounded? What is the chief town?

Victoria? New South Wales? Queensland? South Australia? Western Australia? North Australia? Tasmania? New Zealand? Hawaii?

Islands.—Where situated? To what division does it belong?

Sumatra? Java? Borneo? Celebes? Sunda Islands? Banca? Singapore? Philippine Islands? Luzon? Mindanao? Molucca or Spice Islands? Gilolo? New Guinea? New Ireland? New Britain? Salomon? Louisiade Archipelago? New Caledonia? New Hebrides? Australia? Tasmania? New Zealand? Kangaroo? Furneaux? King? Chatham? Marquesas? Low Archipelago? Caroline? Sandwich? Feejee (or Fiji)? Friendly? Navigators? Society? Tahiti?

Capes.—From what coast does it project?

York? Londonderry? North-west? Steep? Leeuwin? Howe? South? North? East?

Mountains.—Where are they?

Australian Alps? Mt. Hotham? Mt. Kosciusko? Liverpool? Blue? Gawler? Darling? Flinders? Southern Alps (N.Z.)? Mt. Cook? Mauna Loa?

Seas, Gulfs and Bays.—Where is it?

China? Sulu or Mindanao? Celebes? Java? Flores? Banda? Arau? Coral? New Zealand? Carpenteria? Van Diemen? Cambridge? Great Australian Bight? Spencer? St. Vincent?

Straits.—Between what lands? What waters does it connect?

Sunda? Malacca? Molucca Passage? Macassar? Torres? Bass? Cook? Foveaux?

Rivers.—Where does it rise? In what direction does it flow? Into what body of water?

Murray? Darling? Lachlan? Murrumbidgee?

Lakes.—Where situated? What outlet has it?

Eyre? Torrens? Gairdner?

Cities or Towns.—In what colony or island? How situated?

Batavia? Bencoolen? Palembang? Padang? Acehn? Samarang? Surabaya? Singapore? Manila? Sarawak? Brunei? Bandjermasin?

Macassar? Melbourne? Geelong? Ballarat? Castlemaine? Sydney? Newcastle? Port Macquarie? Paramatta? Goulburn? Brisbane? Maryborough? Rockhampton? Ipswich? Adelaide? Perth? Albany? Hobart?

Launceston? Wellington? Auckland? Dunedin? Christchurch? Honolulu?



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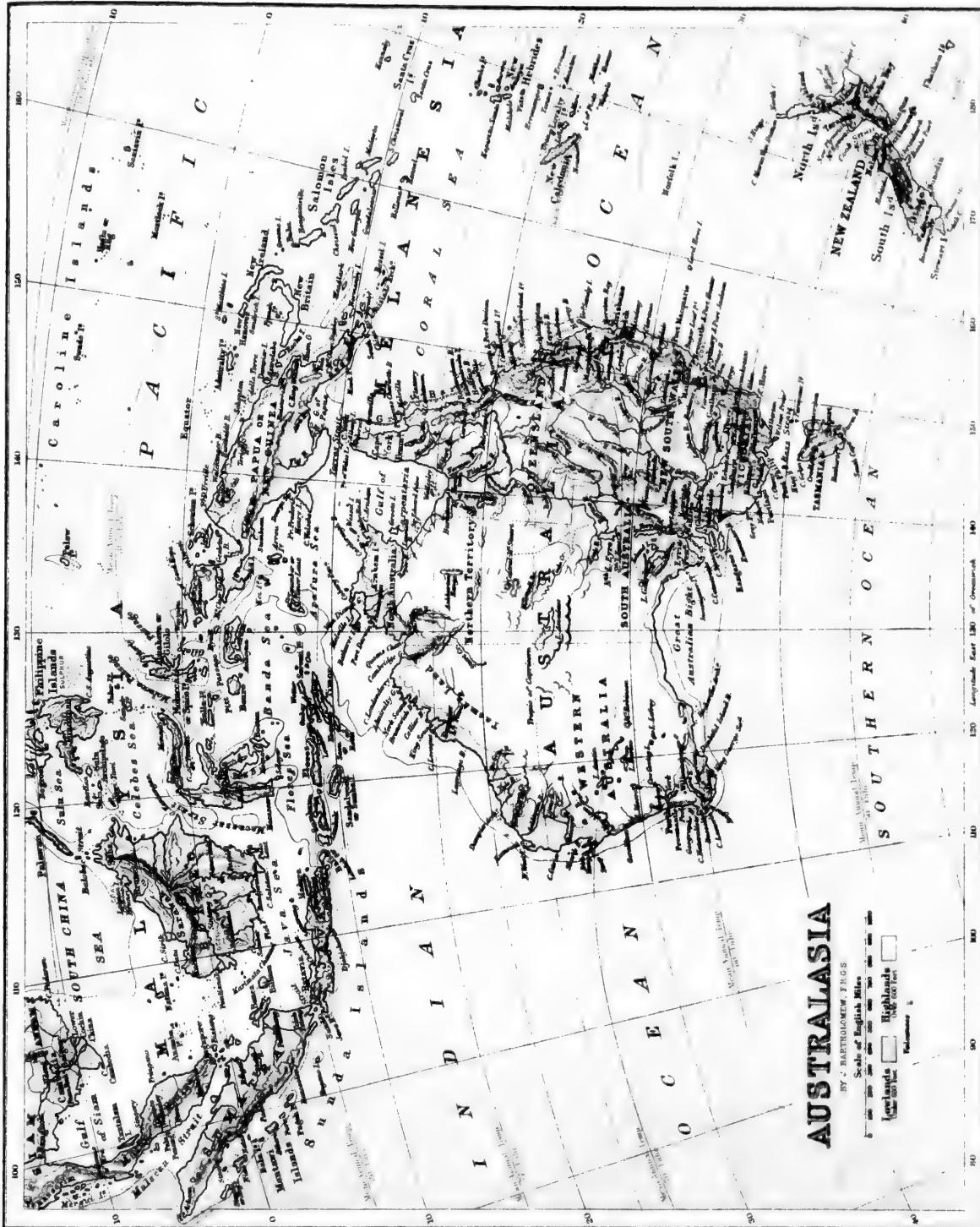
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MALAYSIA.

Malaysia consists of the western islands and groups of islands situated between the Pacific and Indian Oceans, and south-east of the Continent of Asia, from which they are separated by the Strait of Malacca and China Sea. They are entirely within the Tropics.

The **Surface** of all these islands is mountainous. Active and extinct volcanoes are numerous, and earthquakes are frequent, especially in the Sunda Islands. The surrounding seas being shallow (*see Map*), Asia and Australia seem to be connected by a submarine plateau, rising above the general level of the bottom of the ocean.

Except in the elevated regions, the **Climate** is hot; and in the moist lowlands it is unhealthy. The **Soil** is extremely fertile, and owing to the great heat and moisture, the former tempered by the sea-breezes, vegetation is varied and luxuriant.

Malaysia is the greatest **Spice Region** in the world. The forest-trees yield a great variety of valuable woods, such as ebony, teak, the fragrant sandal-wood, and dye-woods, as well as useful gums, of which gutta-percha and India-rubber are the most important. Rice is the chief grain cultivated; sugar-cane, coffee, indigo, yams, and a variety of delicious fruits grow in profusion. The cocoa and sago palms abound.



The spices of commerce are largely cultivated in the islands of Oceania. Cloves are the flower-buds of an evergreen tree; they are gathered when green, and smoked on hurdles over a slow fire. The nutmeg is incased in a black shell, encircled with mace; the fruit is harvested twice a year. The great pepper-producing country is Acheen, in northern Sumatra; the vines are sometimes trained on poles, and attain a height of twenty feet.

Among the wild animals are the elephant, tiger, rhinoceros, buffalo, orang-outang, monkey, and birds of gorgeous plumage.

The **Population** of Malaysia numbers about 30,000,000, or about four times as much as all the rest of Oceania. The people are mostly Mohammedans, and in the larger islands are divided into numerous petty independent states. They are generally brave and intelligent; some of the races possess written languages, but they are inferior to the Hindoos or Chinese in civil-

ization. The Dyaks, the largest and most powerful tribe of Borneo, are Pagans.

The **Malays** are good sailors, and in many cases inveterate pirates. Their warfare, like their ordinary pursuits, is generally on the water, and their long *Prahus*, or war-canoes, filled with armed warriors, are the terror of the peaceful frequenter of these seas. They wear little clothing, live chiefly on rice, fruits, and fish; and dwell in bamboo houses perched on pillars to raise them above the waters (*see engraving, p. 117*).

Malaysia is rich in **Minerals**. With the exception of Java, the larger islands contain gold, copper, iron and tin. Quick-silver is found in Borneo and in the Philippine Islands, and diamonds in Borneo and Celebes. Banca is celebrated for its tin mines.

The **Commerce** of Malaysia is chiefly in the hands of Great Britain, Holland and Spain.

Holland possesses most of the Malaysian Archipelago; the whole of the Moluccas or Spice Islands, Java, Banca, and Sumbawa, with parts of Sumatra, Celebes, Borneo, and Timor. **Spain** possesses the Philippine Islands. **Britain** possesses the small Island of Labuan on the north-west coast of Borneo, and has a protectorate over part of Borneo.

Batavia, on the Island of Java, the capital of the Dutch East Indies, is a large and important commercial city. It exports the coffee and rice of Java, the tin of Banca and Borneo; the pepper, caoutchouc, gutta-percha and camphor of Sumatra; the cloves, nutmegs, and other spices of the Moluccas and Celebes; and other tropical products.

Manila is the capital of the Spanish East Indies, and exports sugar, tobacco, cigars, Manila-hemp, and indigo.

Edible birds'-nests (the nests of sea-swallows) are important articles of export from Java, Borneo, and the Philippine Islands. The nests are about the size of a coffee-cup, and are much prized by the Chinese, who use them in the preparation of soup; the finer sorts sell for twice their weight in silver

MELANESIA.

Melanésia, or "Islands of the Blacks," is a long group of islands east of Malaysia. It includes New Guinea, and extends south-easterly to New Caledonia.

New Guinea ranks next to Australia as the largest island on the globe.

The Melanesian islands are in general highly productive, yielding tropical food-plants and valuable timber-trees, but have very little commercial value. The native inhabitants belong to the Papuan race, a degraded cannibal negro-like people, similar to the native Australians.

The Dutch claim authority over the western half of New Guinea. The French have a penal settlement in New Caledonia. Australia has petitioned the British Crown for leave to annex New Guinea.

AUSTRALASIA.

Australasia comprises Australia, Tasmania, New Zealand, and the adjacent islands. These are all British possessions, and form independent colonies under the British Crown.

AUSTRALIA.

Australia is the largest island in the world, and may be considered as an island-continent. It is only one-seventh less in size than the whole Dominion of Canada, but contains little more than one-half as large a population.

The **Area** of Australia is calculated at nearly 3,000,000 square miles, and the **Population** about 2,300,000.



ANIMALS OF AUSTRALIA.

The animals of Australia present some marked peculiarities. The swan, in other parts of the world white, is here black, with a blood-red bill. Near the black swan in the engraving is the duck-bill, or ornithorhynchus, which can with equal ease run on land and swim in the water, climb trees and dig a burrow in a river-side. In the next vignette we have specimens of the fierce Tasmanian or zebra wolf—the echidna (*echidna*), or porcupine ant-eater—and the wombat, or Australian badger.

Many of the native quadrupeds are pouched animals, and a doe-kangaroo is next shown, with her little one looking out of the remarkable pouch in which it is carried. The kangaroo, with the aid of its long hind legs, can leap fifteen feet or more. It is hunted by both the natives and the English settlers; its flesh is good for food, and its skin for leather, which is used for gloves and shoes. Just below the kangaroo is a koala (*ko-ah'-la*) or little Australian bear, characterized by long tufts of hair upon its ears; the food of this animal consists chiefly of the young leaves, buds and twigs of the gum-trees.

Conspicuous among the birds of Australia is the lyre-bird of New South Wales, so called from the shape of its beautiful tail. In the circle near it is a pair of bower-birds. One is peeping out of its nest, a bower which they have built of twigs and grass, and adorned at its entrance with bones and shells gathered from far and near; their bowers are sometimes three feet long. The c'mu, shown at the bottom of the column, attains a height of six feet. Its flesh is much prized by the natives of the interior, who reserve it for the councillors and warriors, not permitting women or children to partake of it. Like the ostrich, it lays its eggs in a hole which it makes in the sand.

The Outline is very compact, having few indentations except in the north. The Coast-line is about 8,000 miles in length.

It is defended on the north-east by the Great Barrier Reef, which extends about 1,200 miles along the shore, at an average distance of about thirty miles. Between the shore and the reef there is a safe passage for ships.

The Surface of Australia is, in the interior as far as explored, a low plateau, with a depressed region in the south-east. It consists mostly of treeless plains, some of which are covered with tall grass, while others are sandy and barren. The greater part of the country has not yet been explored. The central plains are bordered on the east by a succession of mountain ranges, extending from Cape Wilson in the extreme south to Cape York in the north. The distance of this range from the coast varies from 50 to 150 miles. The loftiest range is known as the Australian Alps in the extreme south-east—partly in Victoria and partly in New South Wales. Mt. Kosciusko has an elevation of 7,300 feet. Lower ranges border the great central plains on the south and west; Gawler and Flinders Ranges in South Australia, and Darling Range in Western Australia. These do not exceed 3,000 feet in height.

The Rivers of Australia are few in number, and of little use for navigation; the most important is the Murray (about 1,200 miles long) with its tributaries. The Lakes—Eyre, Torrens, Gairdner, and others, are shallow, salt, and without any outlet. The scarcity of fresh water, whether in the shape of rivers or lakes, forms a marked characteristic of the Australian Continent.

The Climate is in general healthy. In the northern part, being within the

Torrid Zone, it is hot; in the interior, dry. The south is subject to sudden and great changes of temperature; in New South Wales long droughts are of frequent occurrence, and in the rainy season floods often do great damage.

As Australia is situated in the Southern Hemisphere, the seasons are the opposite of those in Canada; thus, it is hottest at Christmas, and coldest in our midsummer. (See p. 3.)

The Vegetation, like the Animals of Australia, is peculiar, and presents the most striking contrast to that of other parts of the world. The native trees are all evergreens, and do not stand together so as to form dense forests; they consist chiefly of acacias, gum-trees (*eucalyptus*), and gigantic ferns. Very few of the native fruits or roots are capable of being used as food for man; but wheat, maize, the vine, the mulberry; and in the north, cotton, sugar-cane, and tropical fruits, have been introduced and cultivated with success.

All the Domestic Animals of Europe have been introduced into Australia and thrive wonderfully. Sheep-raising is one of the leading branches of industry, and Australia is the chief wool-growing country in the world. Horses and oxen are reared in vast numbers; and rabbits and hares have, in some cases, increased to such an extent as to become nuisances.

The number of sheep in Australia in 1880 was estimated at 65,000,000.

The Natives of Australia are the lowest type of mankind, and are repulsive in their habits and appearance (see p. 18). They are supposed to number about 50,000, but are rapidly diminishing.

The Minerals of Australia are rich and varied. The gold mines are equalled only by those of California, and there are also abundant supplies of copper, iron, tin, lead, silver and coal.

The Maritime Commerce of Australia is nearly all carried on with Great Britain by regular lines of steamships and sailing vessels. One line of

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steamers plies between Sydney and San Francisco, calling at New Zealand and the Sandwich Islands. Railways (4,500 miles) and telegraph lines (30,000 miles) connect the two largest cities—**Melbourne**, the capital of Victoria, and **Sydney**, the capital of New South Wales—with other towns. Australia and New Zealand are connected by a submarine telegraph cable, and are in direct telegraphic communication with Great Britain by means of a line 2,200 miles in length across the middle of the Continent of Australia to the north-west coast; from there an ocean cable extends to Java; thence to Singapore, connecting with other lines and cables to London (*See Commercial Map of the World.*) The chief **Exports** are wool, cotton, wheat, gold, and copper; and the **Imports** are chiefly British manufactured goods.

Australia is divided into five colonies (a sixth, **North Australia**, is in process of formation)—**Victoria, New South Wales, Queensland, South Australia, and Western Australia.**

Each Colony is independent of the others, but all are subject to the British Crown. The **Government** of each colony consists of a Governor appointed by the Crown; and a Legislative Council and Legislative Assembly elected by the people; except in Western Australia, which has only a Legislative Council, some of the members of which are appointed by the Crown, and the rest elected by the people.

Victoria, although the smallest colony, is the most important in population and commerce. Its chief **Exports** are gold and wool.

Melbourne, the capital, on the Yarra River, is the great commercial and monetary centre of Australia. **Geelong**, on the west side of Port Phillip, has a large export trade. **Ballarat** is the centre of a rich mining and agricultural district. **Castlemaine** is the centre of famous gold fields.

New South Wales is the oldest of the Australian Colonies, and on its shores Captain Cook landed in 1770, when he took formal possession of the country in the name of Great Britain. Its gold fields cover a vast area, and have been the means of attracting a large immigration. It contains also valuable coal, copper, and tin mines. The chief **Exports** are wool and gold.

Sydney, the capital, on Port Jackson, is the second city of Australia in importance. **Paramatta**, also on Port Jackson, is famous for its oranges and vineyards; **Newcastle**, for its coal mines. **Goulburn** and other towns are centres of the mining districts.

Queensland was formerly part of New South Wales, but was formed into a separate colony in 1859. It contains valuable gold, copper and coal mines; cotton and the sugar-cane are successfully cultivated.

Brisbane, on Moreton Bay, is the capital. **Ipswich** is the centre of the cotton-producing district.

South Australia forms the Central Colony of Australia, but except in the southern part is unsettled and unexplored. The northern part (*North Australia*) is said to contain some rivers of importance, and is well adapted for the growth of cotton, sugar-cane and coffee. South Australia is more agricultural than any of the other colonies of Australia. Its **Exports** are chiefly copper, wool, wheat, and flour.

Adelaide is the capital.

Western Australia is the largest of the Australian Colonies and the least populated.

Perth, the capital, is a small town on the Swan River. **Albany** is a mail steamship station and the chief place on the south coast.

TASMANIA.

Tasmania, or Van Diemen's Land, as it was formerly called, lies to the south of Australia, from which it is separated by Bass Strait. It includes also the Furneaux Islands and King Island. It is about the same size as New Brunswick, and contains about 116,000 inhabitants.

The **Surface** of the island is mountainous, the soil fertile, and

the climate healthy. Of **Minerals**, tin and coal are most abundant. The chief trade is with the neighboring colony, Victoria. The original inhabitants, of the same race as the Australians, are now extinct.

Hobart, on the River Derwent, is the capital. **Launceston**, on the northern coast, has a considerable trade with Victoria and South Australia.

NEW ZEALAND.

New Zealand consists of three islands, two large and one small, besides some smaller adjacent islands. The two larger are named North and South Islands, and the most southerly is Stewart Island.

The **Area** of the whole is rather less than that of the British Isles, and the **Population**, 490,000. The islands are about 1,200 miles south-east of Australia.

The **Surface** is rugged, and high chains of mountains extend through North and South Islands, some of the peaks of which are covered with perpetual snow. **Mt. Cook** (13,200 feet), in South Island, is the highest.

The **Climate** is salubrious and suitable for the cultivation of every fruit, flower and grain of Ontario. The **Native Inhabitants** are called **Maories** (*Mah'-o-ries*), a brave and intelligent people of the Malay race, numbering about 44,000.

The **Commerce** of New Zealand is chiefly in flax and wool. Gold, iron, coal and copper are the principal **Minerals**.

The **Government** consists of a Governor and a Legislative Council appointed by the Crown, and a Legislative Assembly elected by the people.

Wellington, at the south end of North Island, is the capital. **Auckland** and **Dunedin** are towns of some importance.

Norfolk Island, north of New Zealand and formerly a convict station, **Catham Island** and other adjacent islands, are under the control of the Government of New Zealand.

POLYNESIA.

Polynesia, meaning "Many Islands," comprehends the vast number of islands scattered over the Pacific Ocean south of the Tropic of Cancer.

It is now geographically separated into two parts—**Micronesia**, or "Small Islands," including the islands north of the Equator, and **Polynesia**, those south of the Equator; and is known also as the **South Sea Islands**.

The islands are generally very small and low, of coral formation, except the Sandwich, Society, Marquesas and Feejee Islands, which are volcanic in formation and mountainous.

The **Climate** is all that can be desired. Being situated within the Tropics, it is hot, but the heat is tempered by the sea-breezes. The **Vegetation** is luxuriant, and the soil extremely fertile, producing a variety of indigenous food plants—the bread-fruit (*the main dependence of the islanders*), the yam, sweet potatoes, taro-root, arrow-root, banana, and plantain. Coffee, sugar, cotton, rice, and in fact most of the fruits and vegetable products of tropical or warm countries have been introduced into these islands and are found to flourish.

The South Sea Islanders are of the Malay race, and have the same characteristics as the natives of Malaysia. They are a seafaring people, and display great skill in the management of their canoes. Their total number does not exceed half a million.

The **Sandwich Islands** form the most important group, and are situated a little south of the Tropic of Cancer. They are fifteen in number, but only eight are inhabited, and constitute the **Kingdom of Hawaii**.

They contain many volcanoes. One of these volcanic peaks, **Mauna Loa**, is 13,000 feet high; **Kilauea**, a lower lateral crater of Mauna Loa, is nine miles in circumference, and is the largest in the world; its black lava wall sometimes encloses a sea of fire.

The chief **Exports** are sugar and rice. The **Inhabitants**, numbering 58,000, profess Christianity, and the **Government** is a Limited Monarchy.

Honolulu, the capital and principal sea-port, is a resort for the whaling vessels of the North Pacific, and the port of call for the Australian steamers.

The **Society Islands** contain about 10,000 inhabitants, the majority of whom have been converted to Christianity, and have made some progress in civilization. The Island of Tahiti belongs to France.

The **Fiji Islands**, over 200 in number, belong to Great Britain, and contain 122,000 inhabitants. The Fijians are among the most warlike and skilful of the Polynesians. All of them were formerly cannibals, but they have now given up the practice of eating human flesh.

OCEANIA—STATISTICAL REFERENCE TABLE.

ISLANDS AND COLONIES.	AREA IN Sq. MILES.	POPULATION.	PERSONS TO A Sq. MILE.	CAPITAL.	POPULATION.	PRINCIPAL EXPORTS.
Malaysia —						
Dutch Possessions—						
Java.....	50,980	10,298,804	380 1	Batavia.....	102,907	Coffee, rice, tin, spices, caoutchouc, gutta-percha, camphor.
Moluccas and other Islands.....	668,736	8,400,000	13 1			
Spanish Possessions—						
Philippine and other Islands.....	115,632	6,344,665	55	Manila.....	270,000	Sugar, tobacco, Manila hemp, cigars, indigo.
British Possessions—						
Labuan.....	30	3,268	109	.....	.....
Northern Borneo.....	22,000	150,000	7	Sarawak.....	.....	Sago, bees-wax, camphor, rattans, tortoise-shell, edible birds'-nests.
Borneo.....	268,030	1,750,000	7	Brunei.....	.....
Melanesia —						
New Guinea.....	303,430	250,000	1	.....	.....
New Caledonia and Tahiti (French)	11,254	109,956	92	.....	.....
Australasia —						
British Colonies—						
Australia—						
Victoria.....	88,898	862,346	9	Melbourne.....	282,947	Gold, wool.
New South Wales.....	310,955	751,940	2 1/2	Sydney.....	233,554	Gold, wool.
Queensland.....	669,529	213,525	.....	Brisbane.....	33,000	Wool, gold, sugar, tin.
South Australia.....	903,990	279,865	.....	Adelaide.....	47,979	Copper, wool, wheat, flour.
Western Australia.....	1,000,000	31,000	.....	Perth.....	7,000	Wool, timber, lead, copper-ore.
Tasmania.....	26,215	115,705	4	Hobart.....	21,000	Wool, tin, gold.
New Zealand.....	105,970	533,942	5	Wellington.....	20,563	Wool, flax.
Polynesia —						
Hawaii.....	7,628	72,000	9	Honolulu.....	17,200	Sugar, coffee, rice, hides.
Fiji Islands.....	8,034	124,858	15	.....	.....	Cotton, sugar, pearl-shells, cocoanut-oil.
Navigators' and Friendly Islands.....	1,460	61,800	4	Samoa.....	.....	Sugar, pearl-shells, arrowroot.
Other Islands of Africa.....	17,000	250,000	15	.....	.....
TOTAL	4,579,271	39,353,663	8 1/2			

GENERAL QUESTIONS.

Commercial.—Which is the largest island of Oceania? Which two rank next? Which is the most populous? What islands contain the two largest cities? Which are the two next largest? On what islands are they? What colony has about the same extent as Ontario? As New Brunswick? Which of the Australian colonies contains the largest population? What colonies export wool? Gold? Flax? Copper? Tin? What islands export spices? Coffee? Camphor? Tortoise-shell? Pearl-shells? Sugar? Rice? Caoutchouc? Bees-wax? Gutta-percha? Sago? Arrow-root? Indigo? Tobacco? Rattan?

Voyages.—If a vessel sails from Melbourne to Singapore, what cargo would she probably carry? Past what islands would she sail? Through what strait? If a vessel sails from Wellington to Batavia what cargo would she probably carry? Through what seas would she pass? Through what straits? Past what islands? What cargo would be shipped from Batavia to Rotterdam? From Manila to Cadiz? From Honolulu to San Francisco?

Telegraphs.—How can a telegraph message be sent from New Zealand to Australia? From Australia to Singapore?

THE ANTARCTIC REGIONS. (*See Maps of Hemispheres.*)

The **Antarctic Regions** include some extensive tracts of land and a number of islands situated within the Antarctic Circle. These tracts of land are supposed to form part of a Southern Continent, but very little is known of them.

Various exploring expeditions have been sent out for the purpose of Antarctic discovery, most of them in the first half of the present century. In 1841, an English expedition under Captain Ross explored the steep and rocky coast known as **Victoria Land**. It is covered with perpetual snow, but its most remarkable feature is an active and enormous volcano, which he named **Mt. Erebus**. It is 12,400 feet high, and its flames, rising high above its lofty

crater, throw a terrific light over these dreary and desolate regions. To the east of it is **Mt. Terror**, another volcano (10,900 feet). Both of these owe their names to the celebrated exploring ships, Erebus and Terror.

The other tracts are **Graham**, **Enderby** and **Wilkes Land**, the latter discovered by an American expedition under Captain Wilkes in 1842. No important discoveries have been made since then.

The principal islands are the **South Shetland**, **South Orkney** and the **Balleny Islands**. With these may be included **South Georgia**, **Kerguelen**, **Prince Edward's**, **Crozet's**, **Heard**, **Marion**, and **Tristan da Cunha**, which, though much farther to the north, partake of the same desolate character.

So far as is known, the Antarctic Regions are devoid of human population.

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THE COMMERCIAL MAP OF THE WORLD.

This Map is drawn on what is called "Mercator's Projection," after the name of the inventor. It represents the Earth's surface expanded, as it would have to be to coincide with the surface of a hollow cylinder or tube, instead of the actual globular form?

The Meridians, or lines of longitude, are thus converted into straight, parallel lines, so that the actual relative position of one place to another can be readily distinguished by the eye. The Degrees of Longitude, instead of diminishing in proportion to their distance from the Equator, are increased to a uniform length; and the Degrees of Latitude are also increased in the same proportion. The consequence is, that the size of countries in high latitudes, north or south, is greatly exaggerated, as can be seen by comparing this map with that of the Western Hemisphere. In this map, North America appears much larger than South America, and in the other they appear nearly equal.

The exact Direction of one place from another is shown, and hence Mercator's charts are used by navigators.

(In this map only the principal steamer and sailing routes are shown.)

QUESTIONS ON THE MAP.

North America.—What principal sea-port has Canada on the Atlantic coast? On the Bay of Fundy? What two on the St. Lawrence? What port on the Pacific coast? What port is in Newfoundland? Name six sea-ports on the Atlantic coast of the United States. Three on or near the Gulf of Mexico. Two in Mexico on the Gulf of Mexico. Three in Central America on the Caribbean Sea. Four islands in the West Indies which are ports of call for steamers. What port in the Pacific is opposite Aspinwall? What ports does a steamer touch at between San Francisco and Panama? By what sea-routes can a person travel from Halifax to Victoria (*V.I.*) via the Isthmus of Panama? At what ports would he call? By what routes is tea brought from China across the Pacific Ocean? Why does the steamship route between San Francisco and Japan differ from the sailing route? Which of the steamer routes from North America to Europe is the shortest? The longest? What are the principal steamer routes between North America and Europe? Between North America and the west? By what two routes can a person travel from Toronto to Bermuda? From Halifax to Hong-kong? By what route from Quebec to Rio de Janeiro? What are the ports of call between New York and Aspinwall?

What submarine cables extend from North America to Europe? To the West Indies? To South America? How can a telegraphic message be sent from Toronto to Melbourne (*Australia*)?

South America.—What three South American ports are on the Caribbean Sea? Name nine Atlantic ports of South America. Five Pacific ports. What steamship connection has South America with other countries? What ports in South America are connected by steamer with Canada? At what ports would a steamer touch in going from Panama to Valparaiso? From Valparaiso to Montevideo? From Montevideo to St. Thomas? What is the principal route from Montevideo to Europe? What strait in the south enables steamers to make a shorter passage than sailing vessels? What island in the West Indies is the chief point of call between North and South America?

How can a telegraphic message be sent from Toronto to Rio de Janeiro? What are the termini of the submarine cable between South America and Europe? How can a message be sent from Havana to Valparaiso?

Europe.—Name the most northerly sea-port of Europe. A port on the White Sea. Six ports on the Baltic, and to what countries they belong. The principal continental Atlantic sea-ports, and where situated. Ten sea-ports in the British Isles. The chief ports on the Mediterranean Sea, and where situated. On the Black Sea. On the Caspian. What are the principal steamer routes from Europe across the Atlantic? What is the shortest steamer route between Western Europe and Eastern Asia? What canal do steamers pass through? From what port do the French steamers leave for India? What island in the Mediterranean is a port of call for British steamers? From what town in Italy do the British steamers to India carry the mails? Between what towns in Britain and Iceland is trade carried on? Name the principal ports in Britain connected by steamer with Canada. The continental ports. (*Havre, Antwerp and Hamburg*.)

How can a telegraphic message be sent from London to Toronto? From Paris? From Lisbon to Rio de Janeiro? From England to Bombay? To Singapore? To Hong-kong? To Melbourne? From St. Petersburg to Kiakhta and the Russian Pacific ports?

Asia.—What is the principal sea-port on the Mediterranean in Asia Minor? On the Black Sea? In Southern Arabia? On the Persian Gulf? In the south-east of Arabia? On the Arabian Sea? What three in the Bay of Bengal? What port in Ceylon? Off the southern extremity of the Malay Peninsula? Name three ports in eastern Indo-China? Which belongs to France? What are the chief ports of China? Which belongs to Great Britain? What are the chief ports of Japan? What Russian port is in the south of Kamchatka? On the Sea of Okhotsk?

What peninsula of Asia is crossed by a railway? Between what three large cities does it extend?

What are the principal steamer routes from the Suez Canal to the east? At what places would a steamer call going from Suez to Hong-kong? From Bombay to Calcutta? From Hong-kong to San Francisco? From Suez to Melbourne?

What are the principal caravan routes of Asia? What towns are passed between Pekin and Moscow? Between Pekin and Astrakhan? Between Bassorah and Constantinople? Between Damascus and Aden? Between Delhi and Damascus?

What submarine telegraph cables connect Europe with India? Between what cities? How is India connected by telegraph with Australia? With Hong-kong?

Africa.—Name three African ports on the Mediterranean Sea. Six on the Atlantic coast. What sea-port belonging to Great Britain is at the southern extremity of Africa? What six ports are on the eastern coast? Between what towns are the principal caravan routes of Africa?

How is Cape Town connected with Britain by steamer route? At what islands do the steamers call? What ports are touched between Cape Town and the Suez Canal? What islands are passed by a vessel sailing from London to Melbourne, after rounding the Cape of Good Hope? Why do sailing ships go so far to the westward to round the Cape of Good Hope?

Oceania.—Name five ports on the east coast of Australia. Three on the south. One on the west. What port is in Java? In the Philippine Islands? What two ports in Tasmania? What four ports in New Zealand? What port in the Sandwich Islands? In the Society Islands? At which ports do steamers touch in going from Melbourne to San Francisco? Why do vessels sail from Australia to London round Cape Horn, and from London to Australia round the Cape of Good Hope? At what ports does a steamer touch in going from Melbourne to the Suez Canal? What islands does a steamer call at between Sydney and Honolulu? What lines of steamers connect Australia with Europe? What telegraph lines connect Melbourne with India?

General.—A steamer sails from London to Smyrna, with an assorted cargo, touches at Cadiz, Gibraltar, and the leading ports of the Mediterranean: what classes of articles will probably constitute the chief part of her cargo? The same vessel sails from Smyrna to Montreal, stopping at the Mediterranean ports: what articles would she probably bring? She then sails from Montreal to Liverpool: what will her cargo then be?

A steamer sails from Montreal to Rio de Janeiro, touches at Halifax, St. Thomas, and other intermediate points: what articles is she likely to carry out? To bring back?

A steamer sails from Baltimore to Liverpool, calling at Halifax and St. John's (Nfld.); what articles would she probably carry? What would she bring back?

What cargoes would be carried from Pictou (N.S.) to Montreal? From St. John (N.B.) to Porto Rico? From Montevideo to Southampton? From Melbourne to London? From Bombay to Hong-kong? From Shanghai to San Francisco? From Porto Rico to Halifax? From St. John's (Nfld.) to Lisbon? From New Orleans to Hamburg? From Savannah to Liverpool? From Quebec to Glasgow? From Victoria (B.C.) to San Francisco? (Coal.) Where are the chief whale fisheries? Seal fisheries? Cod fisheries? Pearl fisheries?

From what countries are the chief supplies of cotton derived? Of wool? Of tea? Sugar? Coffee? Tobacco? Silk? Jute? Pepper? Spices? Indigo? Cinchona (*Peruvian Bark*)? Tapioca? Molasses? Wheat? Rice? Maize? Flaxseed? Opium? Hides? Cattle? Furs? Gold? Silver? Copper? Coal? Iron? Tin? Petroleum? Ivory? Ostrich feathers? Palm-oil? India-rubber? Gutta-percha? Sago? Dates? Dried fruits? Attar of roses? Cork? Sponges? Guano? Eider-down? Timber? Gypsum? Wines? Olive-oil? Salt? Fish?

COMMERCIAL CENTRES AND THEIR EXPORTS

COMMERCIAL CENTRES AND THEIR EXPORTS.—STATISTICAL REFERENCE TABLE.

CITY OR TOWN.	PRINCIPAL EXPORTS.	CITY OR TOWN.	PRINCIPAL EXPORTS.
Acapulco	Silver, copper, skins, cocoa, indigo, mahogany, drugs.	Liverpool	Iron, cutlery, earthenware, cottons, chemicals, coal.
Adelaide	Wool, wheat, copper.	London	British manufactures, foreign products.
Aden	Coffee, indigo, dates, drugs, pearls, aromatic gums.	Lyons	Silk manufactures.
Alexandria	Grain, cotton, dates, drugs.	Madeira	Wines, fruits, nuts.
Algiers	Grain, wool, skins, esparto, cork, copper, dates.	Malaga	Oranges, wine, raisins.
Amsterdam	Butter, cheese, cattle, flax, madder, spices.	Manila	Sugar, tobacco, cigars, hemp, indigo, cabinet-woods.
Archangel	{ Flax, hemp, linseed, rye, skins, forest-products, tallow.	Marseilles	Wine, brandy, sardines, silk, fruits.
Astrakhan	Fish, oil, lamb-skins.	Mauritius Island	Sugar vanilla.
Auckland	Wool, gold, lumber, flax, tallow.	Melbourne	Gold, wool, wine.
Azores Isles	Wine, oranges, lemons.	Mobile	Cotton, forest-products.
Bahia	Sugar, coffee, cotton, tobacco, diamonds, nuts.	Monrovia	Palm-oil, wax, pepper, ground-nuts, gold, ivory.
Baltimore	Tobacco, wheat, petroleum, oysters, coal.	Montevideo	Cattle-products.
Bangkok	Rice, spices, sugar, gamboge.	Montreal	Breadstuffs, forest-products, dairy-products, cattle.
Barcelona	Wines, cork, iron, copper, quicksilver, dried fruits. { Sugar, coffee, rice, indigo, tobacco, tin, spices, caoutchouc, gutta-percha.	Marocco	Goat-skins, wool, cork, dates, maize, olive-oil.
Batavia	Linen manufactures.	Manchester	Sugar.
Belfast	Lumber, fish, ice.	Newcastle	Cotton manufactures.
Bergen	Metallic manufactures.	New Orleans	Coal.
Birmingham	Cotton, opium, coffee, spices, sugar, indigo.	New York	Cotton, sugar, tobacco.
Bombay	Wines, brandies, preserved fruits and meats.	Nijni-Novgorod	Grain, varied manufactures, petroleum, provisions. Annual fairs.—Furs and Asiatic products.
Bordeaux	Varied manufactures, prepared foods, ice.	Odessa	Wheat, tallow, salt, timber.
Boston	Linen and woollen goods, glass, wine, beer, grain.	Okhotsk	Furs, fish-oils.
Bremen	Lace manufactures.	Oporto	Wine, olive-oil, fruits, cork.
Brussels	Wool, hides, tallow, beef.	Ottawa	Lumber.
Buenos Ayres	Silks, shawls, carpets, wool, drags, dried fruits.	Palermo	Grain, fruit, olive-oil.
Bushire	Cotton, opium, rice, jute, indigo, silk. { Guano, saltpetre, cinchona-bark, silver, wool, sugar, alpaca wool, furs.	Panama	Cotton, coffee, cinchona-bark, tobacco.
Calcutta	Cochineal, fruits, vegetables, soda.	Para	Caoutchouc, cocoa, rice, sugar, tapioca, cocoa-nuts.
Callao	Tea, silk, Chinese wares.	Paris	Varied French manufactures and products.
Canary Isles	{ Wool, hides, ostrich plumes, wine, copper, dia- monds.	Patna	Rice, opium.
Canton	Coffee, cotton, hides, gold.	Pernambuco	Sugar, cotton, coffee.
Cape Town	Cinchona-bark, coffee, cotton, tobacco, hides.	Philadelphia	Iron, coal, petroleum, machinery.
Caracas	Sugar, coffee, rice, indigo, pepper and other spices.	Portland (Me.)	Lumber, staves, casks, etc.
Cartagena (S.A.)	Cotton, rice.	Portland (Or.)	Wheat, flour, salmon, lumber.
Cayenne	Oats, potatoes, ships.	Quebec	Ships, timber, grain, fish.
Charleston	Grain, pork, lumber.	Rangoon	Rice, teak-wood, petroleum, bamboo, cotton.
Charlottetown	Grain, pork, flux, tobacco.	Reykjavik	Oil, fish, eider-down, feathers.
Chicago	Grain, tobacco, drugs, fruits, carpets, silks.	Riga	Grain, hemp, flax, lumber.
Cincinnati	Damask and iron manufactures.	Rio de Janeiro	{ Coffee, cabinet-woods, diamonds, tobacco, sugar, cotton, caoutchouc.
Constantinople	Grain, lumber, beer, woollens, linens.	Rome	Pictures, statues, and other objects of art.
Damascus	Coffee, timber, pearls.	Rotterdam	Distilled liquors, sugar, spices, cattle.
Dantzig	Cotton, grain, wool.	San Francisco	Wheat, wool, wines, precious metals.
Galle	Watches, jewellery.	Savannah	Cotton, lumber.
Galveston	Silks, olive-oil, wine and spirits, fruits.	Sheffield	Tea, silk, cotton, Chinese wares.
Geneva	Sugar, coffee, cotton, indigo, spices.	Sierra Leone	Cutlery, hardware.
Genoa	Iron and cotton manufactures, iron ships, machinery.	Singapore	Palm-oil, timber, ginger, pepper, bees-wax, ivory.
Georgetown	Cocao, cinchona-bark, dye-woods.	Smyrna	Tin, spices, rattans, gutta-percha.
Glasgow	Dried fish, coal, gypsum, grindstones, lumber.	Stettin	Figs, sponges, raw silk, carpets, leather, drugs.
Guayaquil	Linen and woollen goods, glass, wine, beer, grain.	St. John (N.B.)	Grain, oil-cake, wool, beer.
Halifax	Sugar, coffee, tobacco, cigars.	St. John (N.F.)	Lumber, staves, fish, ships.
Hamburg	Articles of taste and fashion, wine, brandy, oil.	St. Louis	Cod-fish, seal-skins, cod and seal oil.
Havana	Tea, raw silk, Chinese wares.	St. Paul de Loanda	Grain, machinery, manufactures.
Havre	Sugar, cocoanut-oil.	St. Petersburg	Wax, ivory, palm-oil.
Hong-kong	(From China to Russia) tea, fruits, porcelain, silk.	Tamatave	Tallow, flax, hemp, leather, furs, skins, grain.
Honolulu	Sugar, rum, molasses, coffee, allspice.	Trieste	Wool, cattle-products, tin, copper, gold.
Irkutsk	Coffee, cocoa, indigo, cattle-products.	Valparaiso	Caoutchouc, cattle, hides, wax, ebony-wood.
Jamaica	Woollen manufactures.	Vera Cruz	Grain, flour, lumber, wine, oil.
La Guaya	Annual fairs.—Books, furs, German manufactures.	Victoria (V.I.)	Grain, copper, silver, wool, hides.
Leeds	Wine, olive-oil, fruits, minerals, cork.	Vienna	Coffee, vanilla, hides, tobacco, cochineal, indigo.
Leipzig		Yakutsk	Furs, timber, coal, fish, seal-skins.
Lisbon		Yokohama	Leather goods, glass-ware, musical instruments.

QUESTIONS ON THE TABLE.

What are the principal grain ports of the world? From what cities is wheat shipped? Rice? Sugar? Tea? Coffee? Cocoa? Fruits? Wines? Tobacco? Molasses? Olive-oil? Spices? Salt? Dairy products? Cotton? Wool? Silk? Saltpetre? Coal? Iron? Copper? Gypsum? Sponges? Fish? Furs? Pearls? Eider-down? Cabinet woods? Caoutchouc? Gutta-percha? Drugs? Opium? Cochineal? Petroleum? Cinchona-bark? Cork? Flax? Hemp? Wool? Hides? Jute? Indigo? Guano? Timber?

Where can we obtain cotton goods? Woollens? Silks? Linens? Car-

pets? Shawls? Leather goods? Glass-ware? Earthenware? Ostrich plumes? Musical instruments? Porcelain? Chemicals? Where are iron ships built? From what ports do we receive iron manufactures? Machinery? What city is the centre for metallic manufactures? Cutlery? Hardware?

What cities have annual fairs? What articles are chiefly sold at these fairs?

What city in Canada exports cattle? Timber? Lumber? Fish? Grindstones? Grain? Dairy products? Staves? Furs? Ships? From what British North American port are seal-skins, cod-fish and oil exported?

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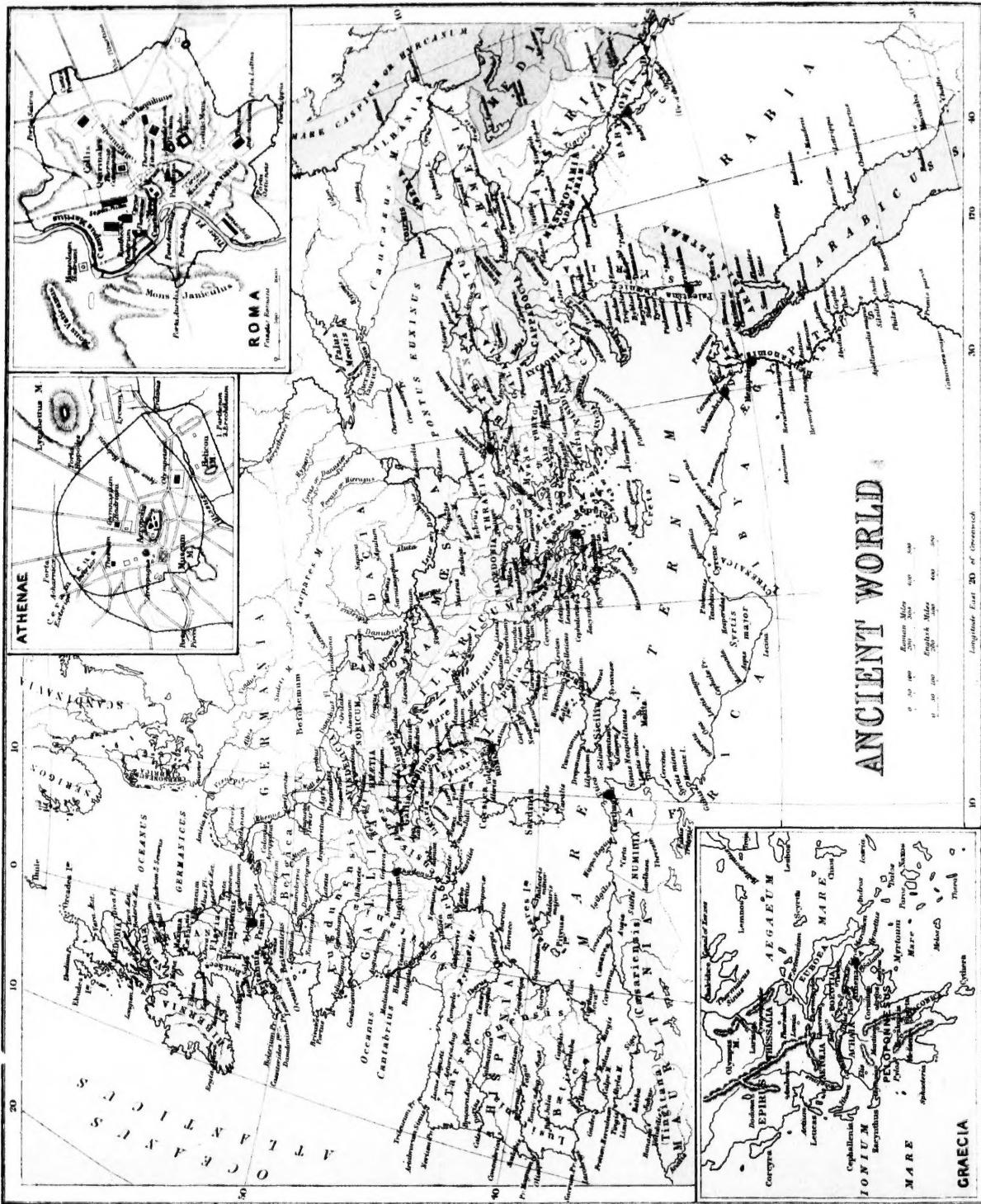
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A SHORT SKETCH OF ANCIENT GEOGRAPHY.

(For the use of Candidates for the Intermediate Examinations, Teachers' Certificates, and University Junior Matriculation.)

GENERAL DESCRIPTION.

Ancient Geography is almost exclusively confined to the countries bordering on the Mediterranean Sea; during the period of the power of Greece and Rome, the shores of that sea were the scene of nearly all the life and actions of classical antiquity.

The names of the principal **Political Divisions** and **Physical Features**, excepting such as are given in detail hereafter, were:—

Countries.—Britannia, Gallia, Hispania, Italia, Græcia, Macedonia, Illyricum, Asia Minor.

Seas.—Mare Internum (*Mediterranean*), Pontus Euxinus (*Black Sea*), Ægæum Mare (*Egæan*), Eubœcum Mare (*Channel of Taranto, between Negropont [Eubœa] and the mainland*), Propontis (*Sea of Marmora*), Hadriaticum vel Superum (*Adriatic*), Tyrrenum vel Inferum (*Tyrrenian*), Oceanus Atlanticus (*Atlantic Ocean*), Oceanus Cantabrus (*Bay of Biscay*), Oceanus Britannicus (*English Channel*), Oceanus Germanicus (*North Sea*).

Britain, France, and Spain, being outlying countries, will be first mentioned, and their principal features alluded to; but more minute particulars of **Italy, Greece, and Asia Minor** will be given, as being of more practical use to the student.

BRITANNIA.

Britain (*Britannia, Albion*) was little known before the time of Cæsar's incursions (B.C. 58 and 55).

The only names mentioned by Cæsar are—Cantium (*Kent*) and Tamesis (*the Thames*).

The principal **Physical** and **Political Features** then known, were:—

Rivers.—Tamesis (*Thames*), Alamus (*Tweed*), Tisa (*Tees*).

Promontories.—Ocellum (*Spur Head*), Cantiuum Promontorium (*North Foreland*), Ocrinum (*Lizard Point*), Bolerium (*Land's End*).

Islands.—Mona Taciti (*Anglesey*), Mona Casarisi (*Isle of Man*), Cassiterides (*Sicily Islands*).

Tribes.—Canti in Kent; south-west of them, the *Regni*; farther west, the *Belgae*; in the north, the *Trinobantes* and *Brigantes*.

Chief Towns.—Londinium (*London*), Camulodunum (*Colchester*), Rutupia (*Richborough or Sandwich*), Eboraucum (*York*).

Of **Ireland**, little is learned from the classics but the names—*Hibernia*, *Juverna*, and *Ierne*; and Scotland was known as *Caledonia*.

GALLIA.

France, Switzerland, Holland, and Belgium (*Gallia, Gaul*) were known by the Romans as *Gallia Transalpina*; the northern part of Italy, or valley of the Po (*Padus*) being called *Gallia Cisalpina*.

The principal **Physical** and **Political Features** of the country were:—

Mountains.—Cebenna (*Cévennes*), Arverni (*Auvergne*), Vogesus (*Vosges*), Jura.

Rivers.—Rhodanus (*Rhone*), Garumna (*Garonne*), Liger (*Loire*), Seguana (*Seine*), Matrona (*Marne*), Mosa (*Meuse*), Rhenus (*Rhine*).

Lake.—Lemanus (*Geneva*).

Political Divisions.—Before the Romans divided Gaul into provinces (about 120 B.C.) the country was occupied by the **Belgæ, Celts** and **Aquitani**.

It was afterwards known as **Gallia Braccata** (the Roman territory), and **Gallia Comata** (all the country beyond).

Again (in 27 B.C.) the country was divided into four provinces—

Gallia Narbonensis in the south-east; **Aquitania** in the south-west; **Gallia Celtica** or **Lugdunensis** in the north; and **Gallia Belgica** in the north-east.

Chief Towns.—In Narbonensis—Massilia (*Marseille*), Aquæ Sextiæ (*Aix*), Genèva (*Geneva*), Avenio (*Avignon*), Tolosa (*Toulouse*).

In Aquitania—Burdigala (*Bordeaux*), Mediolanum (*Saintes*).

In Lugdunensis—Lugdunum (*Lyons*), Lutetia (*Paris*), Genabum, or Civit Aurelianorum (*Orléans*), Casarodunum (*Tours*).

In Belgica—Bononia (*Boulogne*), Confluentes (*Coblentz*), Vesontio (*Besançon*), Colonia Agrippinensis (*Cologne*).

HISPANIA.

Spain and Portugal (*Hispania, or Iberia*) occupied the Iberian Peninsula, or south-western extremity of Europe.

The principal **Physical** and **Political Features** of the country were:—

Mountains.—Pyrenæi (*Pyrenees*).

Rivers.—Durius (*Douro*), Tagus (*Tagus*), Anas (*Guadiana*), Baetis (*Guadquivir*), Ibérus (*Ebro*).

Promontories.—Artabrum (*Finisterre*), Sacrum (*St. Vincent*), Junonis (*Trafalgar*), Calpe (*Gibraltar*).

Islands.—Pityusa Insulae and Baleares Insulae (*Balætic Islands*).

Political Divisions.—Hispania Citerior (or Hither), afterwards Tarracensis; and Hispania Ulterior (or Further), divided into Lusitania (*Portugal*), in the west, and Bætica (*Andalusia*) in the east.

Chief Towns.—In Tarracensis—Cæsar Augusta (*Saragossa*), Saguntum (*Murcia*), north of *Valentia*), Carthago Nova (*Cartagena*), Numantia (west of *Cæsar Augusta*), Calle (*Oporto*).

In Lusitania—Salmantica (*Salamanca*), Olisipo (*Lisbon*), Emerita Augusta (*Merida*).

In Bætica—Corduba (*Cordova*), Hispalis (*Seville*), Gades (*Cadiz*), Munda (*Ronda*).

ITALIA.

Italy (*Hesperia, Cænotria, Ausonia, Saturnia*) comprised the whole of the central peninsula which was separated on the north-west by the Alps from the rest of Europe, and surrounded on all other sides by the sea; it included Gallia Cisalpina in the north, Italia Propria in the centre, and Magna Graecia (originally an important colony of Greece) in the south.

The principal **Physical** and **Political Features** were:—

Mountains.—Alpes (*the Alps*), Apenninus Mons (*the Apennines*).

Rivers.—Padus or Eridanus (*Po*), Ticinus (*Ticino*), Rubicon (*Fiumicello*), a small stream flowing into the Adriatic Sea a little south of Ravenna), Arnus (*Arno*), Tiberis (*Tiber*), Anio (*Teverone*).

Lakes.—Verbanus (*Maggiore*), Larius (*Como*), Benacus (*Garda*), Trasymenus (*Perugia*).

Gulfs.—Tergestinus (*Trieste*), Tarantinus (*Taranto*), Scyllæticus (*Squillace*), Terinus (*S. Eufemia*), Laus (*Policastro*), Pæstanus (*Salerno*), Cumæus (*Naples*), Cajetanus (*Gaeta*), Ligusticus (*Genoa*).

Straits.—Fretum Siculum (*Messina*).

Islands.—Sicilia or Trinacria (*Sicily*), Æolie (*Lipari Islands*), Ægusa: In-sulae (*Ægades Islands, west of Sicily*).

Capes.—Pelorus (*Tarco, north-east point of Sicily*), Pachynum (*Passaro*), Lilybæum (*Boeo, near Marsala*).



Political Divisions.—Liguria; Gallia Cisalpina; Venetia, including Carni and Histria; Etruria; Umbria; Picenum; Latium; Samnium; Sabinum; Campania; Apulia; Lucania; and Brutii.

Chief Towns.—In Liguria—Genua (*Genoa*). In Gallia Cisalpina—Placentia (*Piacenza*), Mutina (*Modena*), Ravenna (*Ravenna*), Augusta Taurinorum (*Turin*), Mediolanum (*Milan*), Comum (*Como*). In Venetia—Patavium (*Padua*). In Etruria—Pisa (*Pisa*), Forentia (*Florence*), Herculis Portus (*Leghorn*), Veii (*Isola, near Rome*). In Umbria—Ariminum (*Rimini*), Spoleto (*Spoleti*). In Picenum—Ancona. In Latium—Roma (*Rome*), Praeneste (*Palestrina*), Cajeta (*Gaeta*). In Samnium—Beneventum (*Benevento*). In Sabinum—Reate (*Rieti*), Cures (*Cures*), Sulmo (*Sulmona*). In Campania—Neapolis (*Naples*), Herculanum, Pompeii, Stabiae (*Castellamare*), Capua. In Apulia—Luceria (*Lucera*), Cannae (*Canne, a little south of the Gulf of Manfredonia*), Venusia (*Venosa*), Tarentum (*Taranto*). In Lucania—Metapontum, Heraclea, Thurii, Elea. In Brutii—Croton (*Crotone*), Rhegium (*Reggio*). In Sicilia—Syracuse (*Syracuse*), Selinus.

GRÆCIA.

Greece (*Græcia, Hellas*) comprised the peninsula east of Italia, between the Adriatic and Ægean Seas, and extending north to Macedonia and Illyricum.

The principal **Physical and Political Features** were:—

Mountains.—Cambunii and Pierii Montes, forming the boundary between Greece and Macedonia. In Thessalia—Olympus, Ossa, and Pelion on the east; Orthrys in the south; Pindus on the west, and Oeta in the south. Acrocer-aunii Montes in the extreme south-west of Epirus. Parnassus in Phocis, south of Thessalia; Helicon and Citharon in Boeotia, and Parnes, Pantelicon, Hymettus, Laurium in Attica (*south-east of Thessalia*). In the Peloponnesus—Cyllene, Taygetus, Lycaethus, Erymanthus and Parnon.

Rivers.—Penēus and Sperchius in Thessalia; Arachthus, Acheron and Cocytus in Epirus; Achelous in Acarnania, south of Epirus; Céphissus Major, flowing through Doris and Phocis into Lake Copiūs; Asopus in Boeotia, flowing into the Euboicum Mare; Céphissus Minor in Attica, flowing into Saronicus Sinus (*Gulf of Ægina*); Penēus and Alpheus in Elis in the north-west of the Peloponnesus; Crathis in Achaea, flowing into Corinthian Sinus (*Gulf of Corinth or Lepanto*); in Laconia—Eurētas, flowing into Laconicus Sinus (*Gulf of Marathonis*); in Argolis—Inachus, flowing into Argolicus Sinus (*Gulf of Nauplia*).

Lakes.—Copiūs in Boeotia; Acherusia (*Fusaro*), in the south-west of Epirus; Stymphalus in Arcadia,

Gulfs.—Thermaicus Sinus (*Saloniki*), Pagaseus (*Volo*), Saronicus (*Athens*), Maliacus (*Zeïoun*), Argolicus (*Nauplia*), Laconicus (*Marathonisi*), Messenicus (*Kalamata*), Cyparissius (*Arcadia*), Corinthiacus (*Corinth or Lepanto*), Ambraciensis (*Arta*).

Strait.—Euripus (*Negropont*).

Capes.—Magnesia (*the south-east point of Thessalia*); Sunium (*Colonna, the south-eastern point of Eubœa*); Malea (*Malia*); Taenorum (*Matapan*); Actium (*La Punta, on the north-west, at the entrance to Ambracus Sinus*).

Political Divisions.—Northern Greece—Thessalia in the east, and Epirus in the west.

Central Greece—Acarnania on the west coast; Ætolia, adjoining on the east; Doris and Phocis in the centre; Locris on the shore of the Euboicum Mare; Boeotia and Attica in the south-east; Megaris, forming part of the isthmus between Corinthiacus Sinus and Saronicus Sinus.

Southern Greece, or, Peloponnesus (*Morea*)—Acharia in the north; Elis in the west; Messenia in the south-west; Laconia in the south-east; Arcadia in the centre; Corinthia and Argolis with Sicyonia in the north-east.

Chief Towns.—In Thessalia—Larissa, Pharsalus (*Fersala*), Cynoscephalæ, Phœæ (*Palestina*). In Epirus—Ambracia (*Arta*), Nicopolis, Dodona.

In Acarnania—Anactorium, Stratus. In Ætolia—Thermum (*Vrachori*), Calydon. In Doris—Boium. In Locris—Naupactus (*Lefanto*), Opus, Thermopylae (*a famous pass at the eastern extremity of Mt. Æta*). In Phocis—Delphi (*Castri*), Crissa. In Boeotia—Thebeæ, Platæa, Delium, Coronæ, Charonea (*Kapurna*). In Attica—Athene (*Athens*), Marathon (*Marathona*), Eleusis (*Lepsina*). In Elis—Cyllene, Olympia, Pylos. In Messenia—Pylos (*old Navarino*), Ithomæ. In Laconia—Lacedæmon or Sparta. In Argolis—Argos, Tiryns, Némæa. In Arcadia—Mantinea, Tégæa (*Peali*). In Corinthia—Corinthus (*Corinth*).

Islands.—On the west—Coreya (*Corfu*), Leucadia (*Santa Maura*), Cephallenia, Ithaca; on the south—Cythera (*Cerigo*), Crete (*Candia*); on the east—Ægina and Salamis (*in the Gulf of Athens, or Saronicus Sinus*), Eubœa (*Negro port*), Andros.

In the Ægean Mare (*Archipelago*)—Lemnos (*Lemno*), Thasus (*Thaso*), Lesbos (*Mitylene*), Chios (*Khio*), Cos, Rhodus (*Rhodes*); and in the south-east—the Cyclades, including Délos, Naxos, Paros Mélos (*Mile*), and many others.

ASIA MINOR.

Asia Minor included part of what is now Asiatic Turkey (the Provinces of Anatolia, Rumili, and Karmania), and extended between the Pontus Euxinus and Mare Internum from the Ægæum Mare and Propontis to the Euphrates River.

The principal **Physical and Political Features** were:—

Mountains.—Taurus in the south; Anti-Taurus and Amanus in the south-east; Mt. Ida, near Troy.

Rivers.—Halys, the eastern boundary of Lydia, and Maeander, the southern; Scamander in Mysia.

Political Divisions.—Bithynia, Paphlagonia and Pontus in the north; Mysia, Lydia and Caria in the west; Lycia Pamphilia including (*Pisidia*) and *Cilicia*, in the south; and Phrygia, Lycania, Galatia, and Cappadocia in the centre, with Armenia Minor, a small province in the east between Pontus and Cappadocia.

The **Chief Towns** were:—In Bithynia—Heraclea Pontica (*Ereklı*), Chrysopolis (*Scutari*), Nicæa (*İznik*). In Paphlagonia—Sinopé. In Pontus—Trapezus (*Trabzon*), Zela (*Zille*). In Mysia—Lampsacus, Abydos, Troja or Ilium (*Ilium*), Pergamus (*Bergama*). In Lydia—Phœcea (*Phokia*), Smyrna, Teos (*Boudrun*) Colophon, Ephesus, Magnesia (*Mansia*), Sardis (*Sart*). In Caria—Miletus (*Milata*), Halicarnassus (*Boudroum?*), Cnidus. In Lycia—Xanthus, Patara, Phæsælis (*Fionda*). In Pamphylia—Perga, Selge. In Cilicia—Trajanopolis *vel* Selinus, Seleucia, Tarsus, Issus (*Baias*). In Phrygia, with Lycania—Colossæ, Laodicea, Ipsus, Iconium, Lystra, Dérbe. In Galatia—Gordium. In Cappadocia—Casarea. In Armenia Minor—Nicopolis.

Six western Islands and States were known as the **Dorian States** (*Hēxapolis*); and the principal towns were—Lyndus, Camirus; Ialyssus (*Neocastro*), in Rhodes; Cos, the Island of Cos; Cnidus, at the south-western extremity of Caria; and Halicarnassus, north of Cnidus, also in Caria.

Twelve States on the coast of the Ægean Sea, in Lydia and Caria, were known as the **Ionian States**, of which the principal towns were—Miletus (*Melita*), Myus, Priene (*Samsun*), Ephesus, Colophon, Lebedos, Teos, Erythra, Clazomenæ, Phœcea (*Phokia*), Chios (*Scio, or Khio Island*), Samos (*Island of Samo*).

The **Æolian League** comprised—Cymæ, Larissa, Neontichos, Temnus, Cilla, Notium, Ægirussa, Myrina, Smyrna, towns in Lydia; Pitane, Ægæ, Gryne.

The **Seven Churches** of Asia were—Ephesus, Smyrna, Sardis, Thyatira, Philadelphia, in Lydia; Pergamus, in Mysia; and Laodicea, in Phrygia.

In the Island of Cyprus the chief towns were—Paphos (*Baffa*), Amathus (*Limasol*), Salamis, Citium (*Larnaca*), Soli.

OTHER COUNTRIES.

Germania, Dacia, Pannonia, Moesia, Illyricum, and other States in Europe, as well as the countries of Asia and Africa, have not been taken up, as the geography of them is not necessary for the Examinations.

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